



Labour Price Growth Forecasts

Prepared for the Australian
Energy Regulator

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Dear Claire

Report on labour price growth forecasts

I enclose Deloitte Access Economics' report on the Wage Price Index (WPI) for Australia, New South Wales, Queensland and South Australia prepared for the Australian Energy Regulator.

This report has been drafted on the basis of the forecasts that underpin the December 2019 quarter *Business Outlook* and *Investment Monitor* publications that rely on the September 2019 quarter Australian Bureau of Statistics (ABS) National Accounts. Please note, however, that the December 2019 quarter ABS WPI release has been included in this report.

The outbreak of COVID-19 and the 2019-20 bushfires in eastern Australia will have a significant impact on the economic outlook. Since the forecasts presented in this report were finalised, there have been adverse developments in relation to these situations – in particular, the spread and flow-on effects of COVID-19. The full impact of the bushfires, COVID-19 and the related stimulus measures are not captured in the forecasts presented in this report. These forecasts should be treated with caution against a backdrop of heightened uncertainty around the economic outlook.

Yours sincerely



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Glossary

AAWI	Average Annualised Wage Increase
ABS	Australian Bureau of Statistics
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ANZSIC	Australia and New Zealand Standard Industry Classification
AWE	Average Weekly Earnings
AWOTE	Average Weekly Ordinary Time Earnings
CPI	Consumer Price Index
DAE	Deloitte Access Economics
EBA	Enterprise Bargaining Agreement
GDP	Gross Domestic Product
GSP	Gross State Product
LNG	Liquefied Natural Gas
MW	Megawatt
NDIS	National Disability Insurance Scheme
NEM	National Electricity Market
PV	Photovoltaics
RBA	Reserve Bank of Australia
SFD	State Final Demand
USE	(Expected) Unserved Energy
WPI	Wage Price Index

Executive Summary

Australian wage growth has slowed over the second half of 2019

The Wage Price Index (WPI) grew by 0.5% in the December quarter of 2019, to be 2.3% higher for the year. Wage gains remain above the lows seen in 2017, but the pace of growth has slowed in the second half of 2019. This flat spot in wage recovery reflects the following reasons:

- The Australian economy has weakened.
- The Reserve Bank of Australia (RBA) and the Commonwealth Government have increased stimulus, but not by enough to lower unemployment and absorb remaining spare capacity in the labour market.
- Revised estimates of full employment suggest that the unemployment rate needs to fall to 4½%, rather than 5%, before there is meaningful upwards pressure on wages.
- Productivity growth has been low.
- The confidence of both consumers and businesses has fallen amid bushfires and the spread of the COVID-19 coronavirus.

In 2019, wage gains were faster in the public sector (2.4%) compared to the private sector (2.3%). The fastest wage gains were also in industries in which the public sector plays a larger role, with gains of 3.1% in health care and 2.8% in utilities. At the other end of the scale, wage gains were weakest in the telecommunications industry (1.7%), as well as industries facing challenging conditions such as construction (1.8%), retail trade (1.9%) and manufacturing (1.9%). At the state level, wages grew the fastest in Victoria (2.7%) and Tasmania (2.4%). Wages grew the slowest in Western Australia (1.6%) and Queensland (2.1%).

Wage growth including bonuses and commissions continues to outperform, with total wage growth of 2.5% in 2019. RBA analysis suggests that the share of workers receiving a bonus has increased in recent years. In part this may be due to businesses using bonuses and commissions as a way of rewarding workers without locking in increases to their underlying wage bill – which can be difficult to wind-back when operating conditions worsen.

The share of workers receiving larger wage increases appears to have fallen. According to the RBA, approximately one fifth of workers receive wage gains in excess of 3%, while close to one half of workers receive wage gains between 2% to 3%. There has also been a moderation in award wage increases. The Fair Work Commission's 2019 annual wage review saw award wages increase by 3% (effective from 1 July 2019), compared to the 2018 review figure of 3½%. Approximately one fifth of workers are on an award wage.

Broader measures of earnings have seen stronger growth than the WPI in recent quarters. Average compensation per employee grew by 2.9% over the year to the September quarter of 2019. This measure of earnings allows for changes in the composition of employment and includes non-wage payments such as superannuation, bonuses and allowances. The improvement in average compensation per employee reflects the fact that earlier employment trends (workers leaving high-paid mining-related jobs) have reversed of late (with a sharp acceleration in mining employment), and that a greater proportion of earnings growth is appearing in the form of non-wage payments.

The minimum superannuation guarantee is set to increase from 9.5% to 10% on 1 July 2021, before increasing by 0.5 percentage points each year to reach 12% from 1 July 2025. Unlike some other – broader – measures of labour costs, the WPI does not directly include non-wage costs such as superannuation, but the increases to the superannuation guarantee will result in slower WPI growth than would have otherwise been the case. The impact of this will be gradual and spread over several years, particularly given the fact that wage growth remains subdued.

Looking ahead, there are a number of reasons to suggest that – beyond 2020 (and, in particular, beyond the phase of damage and uncertainty caused by the spread of COVID-19) – the pace of wage gains will gradually pick up from current levels:

- Growth in the Australian economy is expected to reach a trough in 2019-20, before lifting thereafter. Faster economic growth will add to wage pressures in the economy.
- Continued employment gains are expected to absorb some of the spare capacity in the labour market. While recent employment gains have largely been met by an increase in labour force participation, this trend is likely to moderate in the short term. The tightening of labour market conditions will place downward pressure on unemployment and underemployment, leading to gradual improvements in wage growth.
- The Consumer Price Index (CPI) is forecast to lift from 1.7% growth in 2018-19 to 1.8% in 2019-20 before reaching 2.3% in 2024-25. Faster growth in inflation will eventually flow through to wages.
- Although national income growth is forecast to fall from current highs, it will recover to be solid over the forecast period to 2024-25. To date, much of the gain in national income has been directed towards profits, but a greater share of national income is expected to flow through to wages as the labour market tightens.
- In the long run, demographic factors are also expected to add to wage pressures. The increasing retirement among baby boomers is set to restrain growth in the number of potential workers. This should hand employees back some bargaining power in wage negotiations, contributing to higher wage outcomes.

Although wage gains are expected to accelerate over coming years, there are also a number of structural and cyclical factors limiting the pace of this acceleration:

- The current slowdown in the Australian economy, high levels of household debt and increased uncertainty around the economic outlook may prompt employees to prioritise job security rather than wage increases.
- Businesses and employees may have lowered their wage growth expectations following the extended period of slow wage gains.
- RBA analysis has found that workers are now less likely to voluntarily change jobs compared to the mid-2000s. Wage growth is typically lower for workers who do not change employer.
- Both globally and in Australia, economic growth is showing up more in profits and jobs than it used to, but less so in wages. In part, this is due to the fact that employers appear more cautious about adding to their wage bill amid concerns around low rates of economic growth and heightened uncertainty.
- Trends such as automation of work processes, an increase in contract work, and competitive pressures from the internationalisation of services trade have all combined to restrain workers' bargaining power. It is possible that these trends are making workers feel less secure about their future employment and less likely to push for larger pay rises.
- The returns to technological developments, which are increasingly focussed on intangible capital goods such as software and IT, tend to be highly concentrated in a few firms across a small number of sectors. Firms that are unable to innovate and take advantage of new technologies are often choosing to control costs as a way of remaining competitive. This cost-control approach can sit at odds with paying employees higher wages.

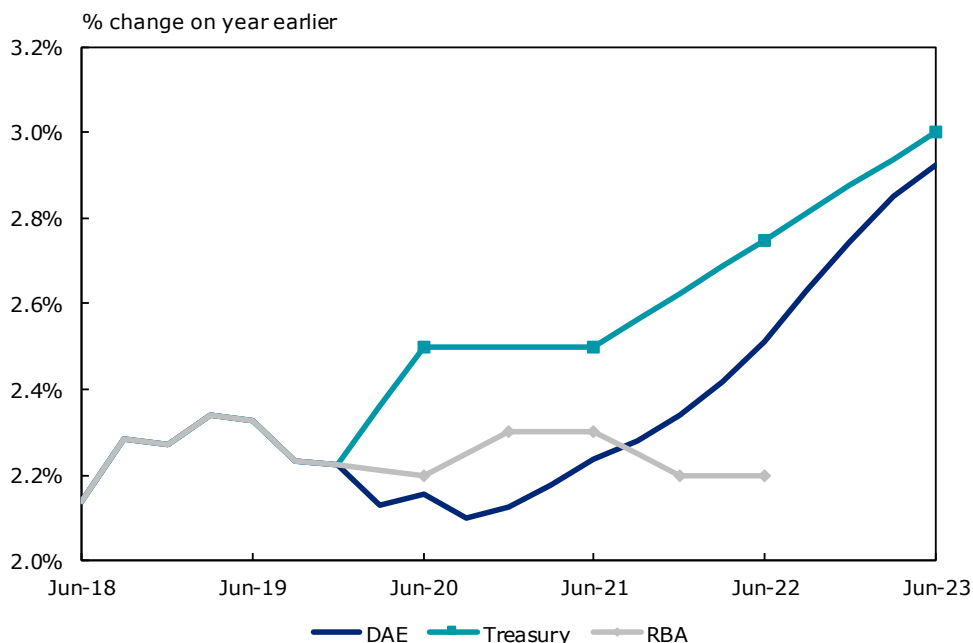
Deloitte Access Economics forecasts nominal wages to lift from 2.2% growth in both 2019-20 and 2020-21 to 2.4% in 2021-22, before reaching 3.0% in 2024-25. This represents a more gradual lift in wage growth when compared to the forecasts presented in Report 3. That is largely reflective of:

- Slower than expected wage growth in 2019 (amid weaker than expected economic growth)
- The impact of the 2019-20 Australian bushfires and COVID-19.

Wage growth has been lowered by a cumulative 1.7 percentage points across the forecast period from 2019-20 to 2024-25.

By way of benchmarking, Deloitte Access Economics' near term forecasts are close to the latest released by the RBA in its February 2020 *Statement of Monetary Policy*, but continue to project a more gradual rate of pick-up in wage inflation than is envisaged in Commonwealth Treasury forecasts published in the *2019-20 Mid-Year Economic and Fiscal Outlook* released in December 2019.

Chart i Comparison of national WPI forecasts by forecaster

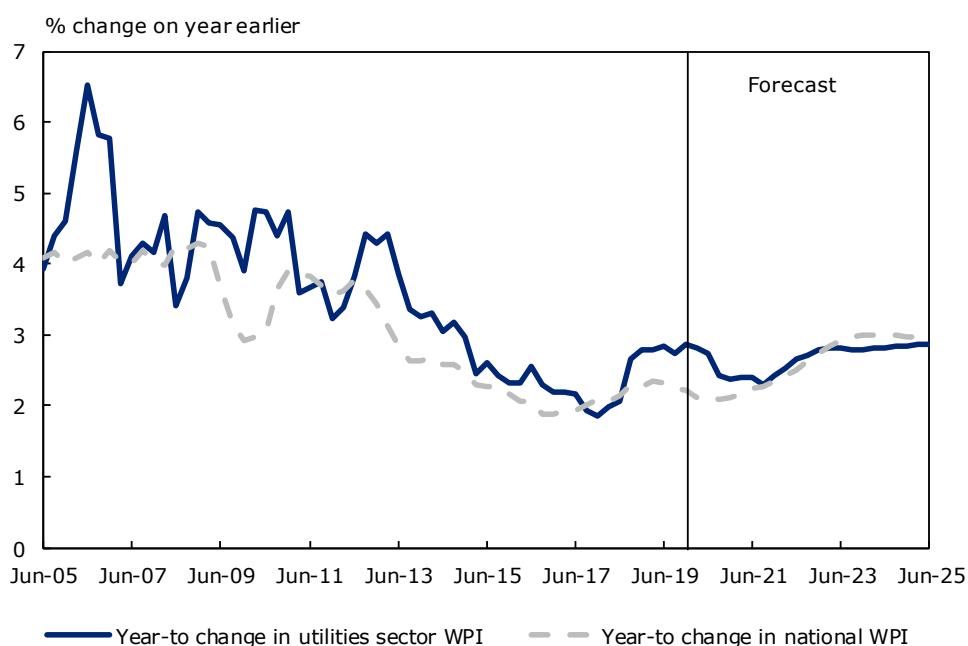


Note: Markers indicate published forecasts, other data points have been imputed. Series are 'year-to' not 'year-average' growth
 Source: Commonwealth Treasury Mid-Year Economic and Fiscal Outlook 2019-20, Deloitte Access Economics, RBA February 2020 Statement of Monetary Policy.

Utilities wage growth to moderate from current pace in the short term

Utilities industry wages grew by 0.6% in the December quarter of 2019 to be 2.8% higher in the year. Wage gains in the utilities industry have accelerated from a low in mid-2018 and are now at the highest rate seen since mid-2015.

Chart ii National utilities industry WPI forecasts



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Deloitte Access Economics.

The improvement in utilities wage gains continues to be sharpest in the private sector. Private sector utilities industry wage gains have accelerated from a low of 1.9% in March 2018 to 3.1% in December 2019, while public sector wages grew from 2.1% to 2.5% over the same period. This was initially due to the strength of private sector employment relative to public sector employment, but this trend has reversed through 2019. The continued strength of private sector wage gains through 2019 likely reflects the fact that labour market changes can take some time to flow through to wages, that four times as many utilities employees work in the private sector than the public sector, and that public sector wages are more affected by trends in Enterprise Bargaining Agreements (EBAs) – where agreements can run for multiple years before being re-negotiated.

The acceleration in utilities wages has not been driven by an improvement in the pace of growth in industry output, which has remained below the growth in the wider economy since 2008-09. Measures of the level of industry labour productivity (which make workers more valuable to businesses) have fallen over the past two years and remain more than two fifths below the peak seen in 2000-01. And conditions remain subdued in a number of other industries that traditionally compete with utilities for labour, with output falling in both the manufacturing and construction industries in 2018-19.

There are a number of potential explanations for the recent acceleration in utilities wages:

- Utilities employment growth remains elevated, helping to absorb spare capacity in the industry. Despite falling from a peak of 9.3% in the year to November 2018 to 2.8% in the year to November 2019, utilities employment growth remains above the 2.4% gain across all industries.
- Record levels of infrastructure investment have seen activity shift away from housing construction towards civil infrastructure construction. It is possible that there is a greater degree of substitutability between the skills required for civil construction and those used in the utilities industry, compared with housing construction and the utilities industry. This would add upwards pressure to wage gains in the utilities industry.
- Conditions in the mining industry have improved in recent years. Growth in output has increased from a low of 1.3% in 2016-17 to 6.2% in 2018-19, while growth in employment increased from -0.8% to 10.8% over the same period. The mining industry traditionally competes with utilities for labour. Strength in the mining industry is likely to add upwards pressure to utilities wages.

- The outperformance of wage gains in the utilities industry relative to the wider economy may reflect factors that are difficult to observe. For example, it is possible that wages have increased because requisite skills have lifted, but – if so – then better skilled workers have yet to boost industry output.

Utilities WPI is forecast to grow by 2.8% in 2019-20 before slowing to 2.4% growth in 2020-21 as utilities employment growth moderates and conditions in the civil infrastructure and mining industries fall from current highs. Utilities wages are then expected to grow at a marginally slower rate than the all industry average from 2023-24. This reflects the fact that utilities output is forecast to grow at a slower rate than the all industry average, while conditions in competitor industries will place limited upwards pressure on utilities wages. This is expected to outweigh the impact of unobserved changes in skills requirements in the long run.

Utilities industry wages are expected to be affected by the 2019-20 Australian bushfires and COVID-19. Bushfires are forecast to increase utilities industry employment during the rebuilding task, with this effect being concentrated in New South Wales and Victoria. COVID-19 is expected to negatively impact utilities industry wages. However, the impact will be most significant for industries that rely on exports (such as mining, manufacturing, education, tourism, etc.).

This represents a slight downward revision to utilities WPI growth from 2020-21 to 2022-23 when compared to the forecasts in Report 3. Utilities wage growth has been lowered by a cumulative 0.5 percentage points across the forecast period from 2019-20 to 2024-25. However, this is a smaller reduction than the 1.7 percentage point reduction seen in forecasts for wage growth across all industries. As a result, utilities WPI relative to the national WPI is higher than previously forecast in Report 3. In part, the adjustment to the expected relativity between utilities WPI and national WPI reflects observed deviations between Deloitte Access Economics' past forecasts and actual outcomes.

Utilities wage growth at the state level will largely mirror national trends

Wage growth for the utilities industry in **New South Wales** was 2.5% in 2019.

- In recent years there has been some convergence between New South Wales and national level utilities industry output growth leading to a stabilisation in relative wages.
- A slowdown in state level economic activity will constrain New South Wales utilities industry output, leading to subdued utilities industry wage growth in the short term. Wages in the New South Wales utilities industry are forecast to grow at a similar pace as wages across the state economy.
- New South Wales utilities industry wages are forecast to increase by 2.6% in 2019-20. By 2024-25, wage growth in the New South Wales utilities industry is projected to reach 2.9%.

Wage growth for the utilities industry in **Queensland** was 2.9% in 2019.

- Wages in the Queensland utilities industry have grown at rates above the national utilities industry for much of the past five years. Although the relatively labour-intensive construction phase of the mining boom has ended Queensland is benefitting from higher electricity demand from new liquified natural gas (LNG) facilities. Looking ahead, the increasing share of renewable energy generation in the state is likely to result in higher demand for particular skills in the utilities workforce, with potential upward pressure on wages.
- Queensland utilities industry wage gains are forecast to fall from 3.0% in 2018-19 to 2.4% in 2020-21, before gradually rising to a peak of 2.9% in 2022-23. This increase in utilities industry wages mirrors the increase in wages across the wider Queensland economy, and is partly due to the forecast for continued growth in utilities output.
- Queensland utilities wage growth is expected to lag marginally behind growth in the wider state economy from 2022-23.

Deloitte Access Economics estimates that **South Australian** utilities WPI grew by 2.1% in 2019.

- Utilities wage growth in South Australia has been lower than national utilities wage growth since late 2015. This slowdown in relative utilities wages has partly been driven by the closure of the

state's automotive industry, challenging conditions in other manufacturing industries and slower growth in the state's economy relative to the national average.

- Growth in South Australia's utilities industry will increasingly be driven by the renewable energy sector in coming years. Over 50% of electricity generation currently comes from wind and solar, with the South Australian Government aiming to reach 100% renewable energy generation within the next ten years.
- South Australia utilities wage growth is forecast to reach 2.3% in 2019-20, up from 2.0% in 2018-19. Utilities wage growth in South Australia is forecast to reach 2.7% in 2024-25 alongside the acceleration in South Australian wage growth across all industries. Despite this, South Australian utilities wages are set to fall relative to national utilities industry wages.

Australia economic growth has slowed amid weak business and consumer confidence

The Australian economy grew by 0.4% in the September quarter of 2019, to be 1.8% larger over the year. The pace of growth has slowed since mid-2018 as falling property prices led to declines in dwelling investment, weak wage growth restricted household consumption and the drought weighed on agricultural output. More recently, weak business and consumer confidence has emerged as a driver of the economic slowdown.

Australian household disposable income growth accelerated in the latest data as both taxes and interest rates were cut, but consumer spending did not accelerate. Private consumption is estimated to have grown by 1.4% in 2019, the slowest rate of growth since 1993. Rather, households appear to be saving the additional income. While the slowdown in the economy had been partly fuelled by an inability to spend, it is now dominated by an unwillingness to spend. According to the ANZ Roy-Morgan survey, consumer confidence has fallen to a four-year low. At the same time the willingness of business to invest has been fading, with successive ABS capex surveys and Deloitte Access Economics *Investment Monitors* showing that businesses are increasingly tentative to spend money on new projects.

Impact of the 2019-20 Australian bushfires and coronavirus (COVID-19)

The outbreak of COVID-19 and the 2019-20 bushfires in eastern Australia will have a significant impact on the economic outlook. Since the forecasts presented in this report were finalised, there have been adverse developments in relation to these situations – in particular, the spread and flow-on effects of COVID-19. The full impact of the bushfires, COVID-19 and the related stimulus measures are not captured in the forecasts presented in this report. These forecasts should be treated with caution against a backdrop of heightened uncertainty around the economic outlook.

2019-20 Australian bushfires

The 2019-20 Australian bushfires have destroyed many regional communities. At least 33 people have died since October 2019, while there has also been the loss of homes, businesses, essential infrastructure and plant and animal life. Gross Domestic Product (GDP) growth will be negatively affected by the disruption to key sectors such as tourism and agriculture, which together account for a substantial share of output and employment in the affected communities. Following this period of disruption, GDP growth will be supported by rebuilding of homes and community infrastructure.

Overall, the bushfires are expected to weigh on economic growth in the December 2019 and March 2020 quarters, followed by a rebound from the June quarter onwards. By late 2020 the negative effects to GDP are likely to have been offset by the recovery efforts.

COVID-19

Since the first cases of COVID-19 were reported in the Chinese city of Wuhan in December 2019 the virus has now spread to approximately 170 countries, infecting 210,000 people and resulting in 9,000 deaths (as at 19 March 2020).¹

The pandemic is having a large impact on the Australian economy, with immediate effects in three key sectors:

- Tourism – the Commonwealth Government is currently (as at 19 March 2020) denying entry to foreign nationals who have been in mainland China, Iran, South Korea or Italy. Many other countries, such as the United Kingdom, are advising their citizens against travelling overseas. This is already weighing on the number of international visitors to Australia. The Commonwealth Government has also placed limits on mass gatherings while many Australians are self-quarantining, leading to a decrease in domestic travel.
- Education – approximately 530,000 international students were enrolled in Australian institutions in January 2020. More than one quarter of these students are Chinese. Travel restrictions have led to a fall in the number of Chinese students commencing study in Australia, while several universities across Australia have cancelled face-to-face classes and campus events.
- Mining – China is the key export destination for many of Australia’s largest commodity exports (such as iron ore and coal). The disruption to industrial activity in China has weighed on the price of some Australian commodity exports, which will have notable impacts on mining profits and employment as well as revenues in government budgets.

The economic impact of COVID-19 is also reverberating far wider than these three sectors. A number of the decisions taken to protect Australian’s health have also hurt the economy. That is a deliberate trade-off that is aimed at slowing the spread of COVID-19. Yet many of the fear-driven decisions by families, businesses and governments around the world are hurting economies without providing extra health benefits. And, in turn, the stresses that creates are rapidly threatening credit flows and a number of otherwise viable businesses.

The Commonwealth Government has announced a \$20 billion stimulus package that provides one-off cash payments to welfare recipients and businesses, tax incentives and health funding. State and territory governments across Australia are also announcing additional funding to help support the economy and fight the disease. Further government spending is expected over the coming months.

Given the rapid spread of the virus and the reactions (and over-reactions) of families, business and governments, a recession now appears likely in Australia.

This has seen real GDP growth drop to the weakest annual rate in a decade, with the slowdown concentrated in domestic demand. Yet the economy is not as weak as households and businesses think it is. Although real GDP is growing at below trend rates, national income is continuing to grow at above trend rates. This has been due to two key factors. Firstly, commodity prices reached near eight-year highs in mid-2019 amid strong demand for iron ore and coal in China and disruptions to global supply. Secondly, Australia’s commodity export volumes have grown rapidly in 2019. As a result, quarterly export earnings on goods are now three fifths higher than they were at the start of 2016. That has helped Australia record a current account surplus for the past two quarters – the first time this has occurred since 1973.

While national income growth is forecast to remain high, the rate of growth is expected to slow. Chinese demand will eventually decrease and the global supply of commodities is beginning to slowly recover. In fact, while commodity prices remain elevated, they are already below mid-2019 peaks.

¹ World Health Organisation, *COVID-19 situation dashboard* (19 March 2020), <<https://experience.arcgis.com/experience/685d0ace521648f8a5beeeee1b9125cd>>.

This suggests that national income growth will continue to support the Australian economy, but to a lesser extent in coming years.

Despite this there are several factors supporting Australian economic growth:

- Property prices have begun to lift from their mid-2019 lows. According to CoreLogic, dwelling prices grew for the seventh consecutive month in January 2020 and are 4.1% higher over the year.
- The Commonwealth Government is providing income tax relief. Although the impact of the first stage of the tax cuts has been blunted by falling confidence and pressures on household budgets, the second and third stages of the tax package are much larger and are expected to further support household spending.
- After maintaining the cash rate at 1.5% from August 2016 to May 2019 the RBA has since cut the rate to 0.25%.
- The Australian dollar has fallen to decade lows against the US dollar and is down against most currencies, helping to support export-oriented Australian businesses.
- The Commonwealth Government and many state governments are investing record amounts on infrastructure. This will support construction activity as well as private investment in the machinery and equipment needed to deliver major projects.

Overall, real GDP is expected to grow by 2.0% in 2019-20, before lifting to 2.4% in 2020-21. Growth in the Australian economy is then projected to reach a peak of 2.9% in 2022-23.

Utilities output to continue growing at a slower pace than the wider economy

Utilities industry output fell by 0.4% in the year to September 2019, below the 1.8% growth for the Australian economy as a whole. Activity fell in the electricity supply (-0.9%) and water supply and waste services (-0.4%) sub-industries, which together account for around 95% of industry output. Elsewhere, output in the gas supply sub-industry grew by 6.5% in the year to September 2019.

Growth in utilities industry output has underperformed growth in the wider economy from 2008-09 to 2018-19. In part, this has been driven by a 7% decline in National Electricity Market (NEM) electricity consumption over the same period.

Demand for grid-supplied electricity has been weighed down by a series of long-running trends. An increasing share of households and businesses have adopted rooftop photovoltaics (PV), battery storage and other small-scale technologies to generate their own electricity. This has reduced the amount of electricity consumed from the grid. Households and businesses have also responded to elevated retail electricity prices in recent years by actively modifying their behaviour to reduce electricity use where possible. There has also been a trend towards more energy efficient appliances, machinery and buildings. The changes in behaviour and improvements in energy efficiency have reduced overall electricity consumption as well as grid-supplied electricity consumption.

According to the Australian Energy Market Operator (AEMO), consumption of grid-supplied electricity is forecast to fall at an average annual rate of 0.4% in the five years to 2024-25. The continued growth in PV systems and improvements in energy efficiency are expected to outweigh the impact of new grid connections and the increased reliance on electricity from Australian households and businesses.

Wholesale electricity prices in the NEM fell by 19% in the year to Q4 2019, reaching a three-year low. This has been driven by three key factors. Firstly, supply from wind farms and solar farms increased following a record 36% gain in installed capacity through 2019. Secondly, gas-fired generation was supported by lower gas prices and outages at a number of coal-fired generators. And lastly, higher rooftop PV output reduced average daytime demand in the NEM. The factors outweighed the effect of electricity supply disruptions and record high temperatures. Wholesale electricity prices are expected to fall further in the coming years, with ASX futures prices for 2020 contracts falling by 15% in New South Wales, 12% in Queensland and 17% in South Australia.

Prices in the NEM are also set to be impacted by large increases in the supply of renewable energy generation. According to AEMO, almost 3,800 megawatts (MW) worth of wind and solar generation projects are currently listed as committed, with 45,500MW listed as proposed. This far outweighs the 2,700MW of coal and gas-fired generation capacity that is expected to be withdrawn from the NEM in coming years. Despite this, the amount of energy that cannot be supplied to customers (Expected Unserved Energy (USE)) is expected to increase from 2022-23. USE is forecast to remain below the maximum threshold set by the Reliability Standard, but the balance between supply and demand is set to tighten – particularly in New South Wales.

The electricity sector faces a number of negative risks over the medium term:

- Continued uncertainty around energy policy settings means greater risk for private investors.
- An acceleration in the uptake of distributed energy resources such as rooftop PV and battery storage systems will weigh on NEM electricity demand.
- Further pressure on the manufacturing industry may see additional industrial electricity users choose to close local operations and move offshore.

There are also a number of upside risks that may support growth:

- An acceleration in the uptake of electric vehicles will increase NEM electricity demand. According to AEMO this will depend on government policies, electric vehicle costs relative to non-electric vehicles, other transport alternatives (e.g. public transport), commercial demand, access to charging infrastructure and the availability of car models in Australia.
- There is also the potential for higher demand from the business sector. This includes demand from traditional manufacturing, mining (particularly the gas and coal mining sub-industries), desalination plants and other services-based businesses (such as the transport industry).

Utilities industry output is expected to fall by 0.1% in 2019-20, below the 0.3% gain in 2018-19. Growth in utilities industry output is forecast to remain weaker than growth in the Australian economy over the forecast period to 2024-25.

Table i State WPI forecasts, all industries

Yearly changes in nominal WPI

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
National	2.3	2.2	2.2	2.4	2.8	3.0	3.0
New South Wales	2.4	2.3	2.2	2.4	2.8	3.0	3.0
Queensland	2.3	2.0	2.2	2.5	3.0	3.1	3.1
South Australia	2.2	2.4	2.3	2.4	2.7	2.8	2.8

Yearly changes in real WPI

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
National	0.6	0.4	0.3	0.4	0.6	0.6	0.7
New South Wales	0.7	0.5	0.3	0.4	0.6	0.6	0.7
Queensland	0.7	0.1	0.4	0.5	0.7	0.7	0.8
South Australia	0.6	0.4	0.5	0.4	0.4	0.4	0.5

Note: annual % change refers to the year-average change.
Source: ABS, Deloitte Access Economics.

Table ii Key variables, Australia

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Output	2.0	2.0	2.4	2.8	2.9	2.8	2.6
Consumer price index	1.7	1.8	1.8	2.0	2.2	2.4	2.3
Wage Price index	2.3	2.2	2.2	2.4	2.8	3.0	3.0
Ave. weekly earnings	2.7	2.3	2.3	2.5	2.8	2.8	2.7
Ave. weekly ordinary time earnings	2.7	3.3	3.0	3.0	3.3	3.4	3.4

Source: ABS, Deloitte Access Economics.

Table iii Economic variables, Australia

Annual % change (unless noted)	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Consumption							
Private sector	2.0	1.1	1.9	2.2	2.4	2.4	2.5
Public sector	4.5	5.5	3.3	1.6	1.6	1.6	1.7
Private sector investment							
Non-business housing	0.0	-8.8	-1.7	6.8	8.8	2.7	-2.8
Non-business real estate	-15.3	-6.3	-1.2	6.6	7.9	2.9	-1.7
Non-residential building	-1.7	-1.1	5.0	6.7	3.3	4.4	3.8
Engineering construction	-10.5	-9.1	5.2	6.2	2.8	3.9	3.3
Machinery and equipment	4.6	-1.3	7.3	8.5	5.1	6.5	6.3
IP and livestock	2.9	7.5	7.4	9.7	6.2	9.6	9.4
Public investment							
General Government	4.5	1.3	3.2	3.9	3.6	3.3	3.2
Public enterprises	-2.5	-2.6	1.0	2.6	1.7	3.2	3.0
Domestic final demand							
Private sector	0.9	-0.2	2.2	3.5	3.3	3.1	2.7
Public sector	4.1	4.4	3.2	2.0	1.9	2.0	2.0
Gross national expenditure	1.5	0.9	2.5	3.2	3.0	2.9	2.5
International trade							
Exports	3.9	3.0	3.6	3.9	4.1	4.8	5.4
Imports	0.2	-0.8	4.7	5.6	4.4	5.4	5.3
Net (% additon to growth)	1.2	0.4	-0.5	-0.1	0.0	0.0	0.2
Total output (GDP)	2.0	2.0	2.4	2.8	2.9	2.8	2.6
Non farm output	2.3	2.0	2.4	2.8	2.9	2.8	2.6
Employment	2.4	2.0	1.7	2.1	1.9	1.6	1.3
Unemployment rate (%)	5.1	5.2	5.3	5.2	5.1	5.0	5.0

Source: ABS, Deloitte Access Economics. All variables (except for population, employment and unemployment) expressed in inflation-adjusted terms.

Table iv Wages and prices, Australia

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Consumer price index (CPI)	1.7	1.8	1.8	2.0	2.2	2.4	2.3
Wage price index (WPI)							
Nominal	2.3	2.2	2.2	2.4	2.8	3.0	3.0
Real	0.6	0.4	0.3	0.4	0.6	0.6	0.7
Average weekly earnings (AWE)							
Nominal	2.7	2.3	2.3	2.5	2.8	2.8	2.7
Real	1.0	0.5	0.5	0.5	0.6	0.4	0.5
Average weekly ordinary time earnings (AWOTE)							
Nominal	2.7	3.3	3.0	3.0	3.3	3.4	3.4
Real	1.0	1.5	1.2	1.0	1.1	1.0	1.1
Unit labour costs							
Nominal	1.9	2.2	0.9	1.6	2.0	2.3	2.5
Real	0.2	0.5	-0.9	-0.4	-0.2	-0.1	0.2

Source: ABS, Deloitte Access Economics.

Table v Industry wages, Australia

Financial year changes in nominal national industry WPI

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
All industries	2.3	2.2	2.2	2.4	2.8	3.0	3.0
Utilities	2.8	2.8	2.4	2.5	2.8	2.8	2.9

Financial year changes in real national industry WPI

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
All industries	0.6	0.4	0.3	0.4	0.6	0.6	0.7
Utilities	1.1	1.0	0.6	0.4	0.6	0.4	0.6

Source: ABS, Deloitte Access Economics.

Table vi State utilities industry nominal wages

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
National	2.8	2.8	2.4	2.5	2.8	2.8	2.9
New South Wales	2.5	2.6	2.3	2.5	2.8	2.8	2.9
Queensland	3.0	2.4	2.2	2.5	2.9	2.8	2.9
South Australia*	2.0	2.3	2.4	2.5	2.6	2.6	2.7

*Historical data estimated using Deloitte Access Economics' wage price model. Unavailable from the ABS.

Source: ABS, Deloitte Access Economics.

Table vii State utilities industry real wages

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
National	1.1	1.0	0.6	0.4	0.6	0.4	0.6
New South Wales	0.9	0.8	0.5	0.5	0.6	0.4	0.6
Queensland	1.4	0.5	0.4	0.5	0.6	0.5	0.6
South Australia*	0.5	0.3	0.6	0.4	0.3	0.2	0.4

*Historical data estimated using Deloitte Access Economics' wage price model. Unavailable from the ABS.

Source: ABS, Deloitte Access Economics.

1 Background

The Australian Energy Regulator (AER) commissioned Deloitte Access Economics to provide forecasts for wage price growth for the electricity, gas, water and waste services (utilities) industry to 2024-25 for the following jurisdictions:

- New South Wales
- Queensland
- South Australia
- Australia.

Specifically, the AER has requested:

- Annual Wage Price Index (WPI) forecasts for Australia and relevant states.
- A brief analysis of the key influences on the forecast changes in the WPI, including:
 - An overview of the national and state economic outlook, including a discussion of the outlook for the utilities industry.
 - An analysis of the national and state outlook for wages for all industries and the utilities industry.
 - A discussion of the key drivers for wage growth including inflationary trends, productivity trends, Enterprise Bargaining data, and relevant cyclical factors.
- A description of the methodology and assumptions used to forecast WPI.

For the states covered in this report, the ABS only releases WPI estimates in the utilities industry for New South Wales and Queensland. For those states where the ABS does not release WPI estimates, Deloitte Access Economics uses a range of related data to estimate the utilities industry WPI.

A detailed methodology description can be found in Report 1 provided to the AER in July 2018.

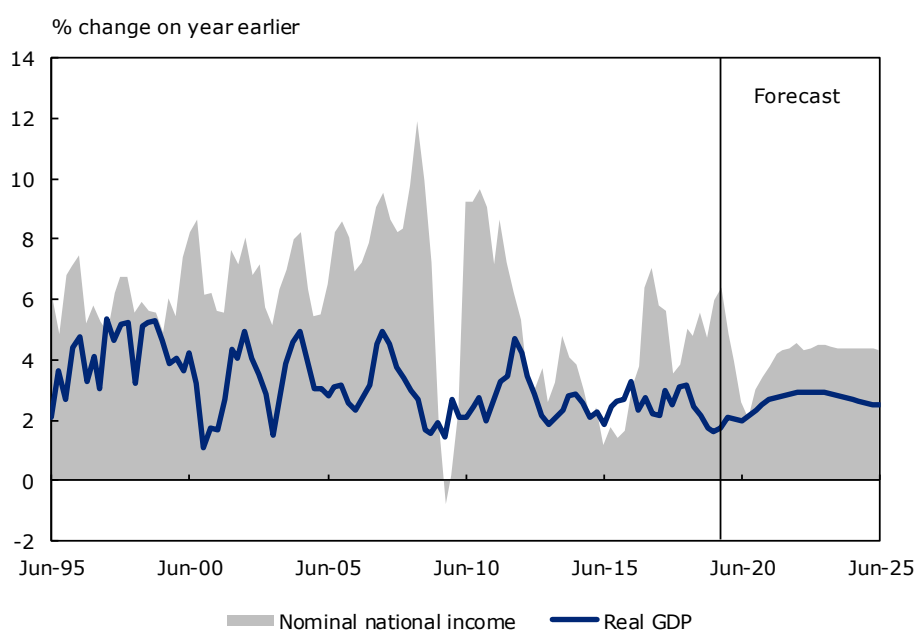
2 Australia

2.1 Economic outlook

2.1.1 Overview

The Australian economy grew by 0.4% in the September quarter of 2019, to be 1.8% larger over the year. The pace of growth has slowed since mid-2018 as falling property prices led to declines in dwelling investment, weak wage growth restricted household consumption and the drought weighed on agricultural output. More recently, weak business and consumer confidence has emerged as a driver of the economic slowdown.

Chart 2.1 Australian production and national income growth



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Australian household disposable income growth accelerated in the latest data as both taxes and interest rates were cut, but consumer spending did not accelerate. Private consumption is estimated to have grown by 1.4% in 2019, the slowest rate of growth since 1993. Rather, households appear to be saving the additional income. While the slowdown in the economy had been partly fuelled by an inability to spend, it is now dominated by an unwillingness to spend.

2.1.2 Impact of the 2019-20 Australian bushfires and coronavirus (COVID-19)

The outbreak of COVID-19 and the 2019-20 bushfires in eastern Australia will have a significant impact on the economic outlook. Since the forecasts presented in this report were finalised, there have been adverse developments in relation to these situations – in particular, the spread and flow-on effects of COVID-19. The full impact of the bushfires, COVID-19 and the related stimulus measures are not captured in the forecasts presented in this report. These forecasts should be treated with caution against a backdrop of heightened uncertainty around the economic outlook.

2019-20 Australian bushfires

The 2019-20 Australian bushfires have destroyed many regional communities. At least 33 people have died since October 2019, while there has also been the loss of homes, businesses, essential infrastructure and plant and animal life. Gross Domestic Product (GDP) growth will be negatively affected by the disruption to key sectors such as tourism and agriculture, which together account for a substantial share of output and employment in the affected communities. Following this period of disruption GDP growth will be supported by rebuilding of homes and community infrastructure.

Overall, the bushfires are expected to weigh on economic growth in the December 2019 and March 2020 quarters, followed by a rebound from the June quarter onwards. By late 2020 the negative effects to GDP are likely to have been offset by the recovery efforts.

COVID-19

Since the first cases of COVID-19 were reported in the Chinese city of Wuhan in December 2019 the virus has now spread to approximately 170 countries, infecting 210,000 people and resulting in 9,000 deaths (as at 19 March 2020).²

The pandemic is having a large impact on the Australian economy, with immediate effects in three key sectors:

- Tourism – the Commonwealth Government is currently (as at 19 March 2020) denying entry to foreign nationals who have been in mainland China, Iran, South Korea or Italy. Many other countries, such as the United Kingdom, are advising their citizens against travelling overseas. This is already weighing on the number of international visitors to Australia. The Commonwealth Government has also placed limits on mass gatherings while many Australians are self-quarantining, leading to a decrease in domestic travel.
- Education – approximately 530,000 international students were enrolled in Australian institutions in January 2020. More than one quarter of these students are Chinese. Travel restrictions have led to a fall in the number of Chinese students commencing study in Australia, while several universities across Australia have cancelled face-to-face classes and campus events.
- Mining – China is the key export destination for many of Australia's largest commodity exports (such as iron ore and coal). The disruption to industrial activity in China has weighed on the price of some Australian commodity exports, which will have notable impacts on mining profits and employment as well as revenues in government budgets.

The economic impact of COVID-19 is also reverberating far wider than these three sectors. A number of the decisions taken to protect Australian's health have also hurt the economy. That is a deliberate trade-off that is aimed at slowing the spread of COVID-19. Yet many of the fear-driven decisions by families, businesses and governments around the world are hurting economies without providing extra health benefits. And, in turn, the stresses that creates are rapidly threatening credit flows and a number of otherwise viable businesses.

The Commonwealth Government has announced a \$20 billion stimulus package that provides one-off cash payments to welfare recipients and businesses, tax incentives and health funding. State and territory governments across Australia are also announcing additional funding to help support the economy and fight the disease. Further government spending is expected over the coming months.

Given the rapid spread of the virus and the reactions (and over-reactions) of families, business and governments, a recession now appears likely in Australia.

² World Health Organisation, *COVID-19 situation dashboard* (19 March 2020), <<https://experience.arcgis.com/experience/685d0ace521648f8a5beeeee1b9125cd>>.

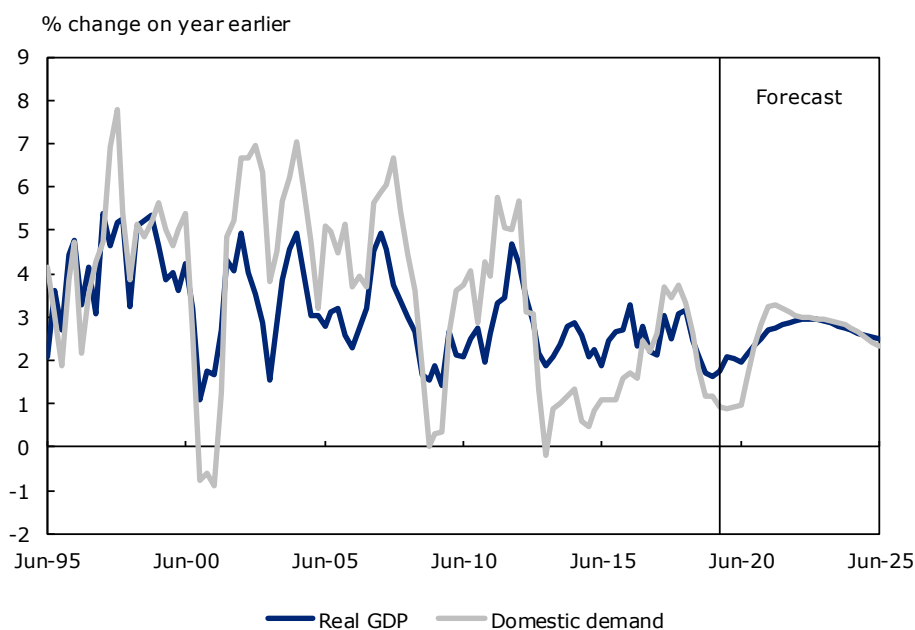
According to the ANZ Roy-Morgan survey, consumer confidence has fallen to a four-year low. And concerns that consumers have are deep-seated. For example, the November 2019 survey found that *"Current economic conditions are at their lowest level since the global financial crisis, while sentiment toward the future economic outlook is at its lowest level since 1994"*. At the same time the willingness of business to invest has been fading, with successive ABS capex surveys and Deloitte Access Economics *Investment Monitor* publications showing that businesses are increasingly tentative about spending money on new projects.

Falling confidence has partly been due to rising global economic risks through 2019. Key downside risks include trade barriers, heightened geopolitical tensions, domestic policy uncertainty in many countries and financial vulnerabilities accumulated over years of low interest rates. The drought in eastern Australia and recent summer bushfires have also weighed on confidence in Australia. The RBA's recent interest rate cuts have also weighed on confidence.

Consumers have accordingly become more cautious, reducing discretionary spending (with retail sales falling by 0.5% in December 2019 and car sales falling by 13% in the year to January 2020).

This has seen real GDP growth drop to the weakest annual rate in a decade, with the slowdown concentrated in domestic demand (see Chart 2.2). Private final demand is estimated to have fallen by 0.1% in 2019, while public final demand grew strongly at 4.6%.

Chart 2.2 Domestic demand and GDP



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Yet the economy is not as weak as households and businesses think it is. Although real GDP is growing at below trend rates, national income is continuing to grow at above trend rates (see Chart 2.1). This has been due to two key factors. Firstly, commodity prices reached near eight-year highs in mid-2019 amid strong demand for iron ore and coal in China and disruptions to global supply – particularly for iron ore. Secondly, Australia's commodity export volumes have grown rapidly in 2019. Projects that began construction during the mining boom are beginning to ramp up production – most recently in the gas sector. As a result, quarterly export earnings on goods are now three fifths higher than they were at the start of 2016. That has helped Australia record a current account surplus for the past two quarters – the first time this has occurred since 1973.

While national income growth is forecast to remain high, the rate of growth is expected to slow. Chinese demand will eventually decrease and the global supply of commodities is beginning to slowly

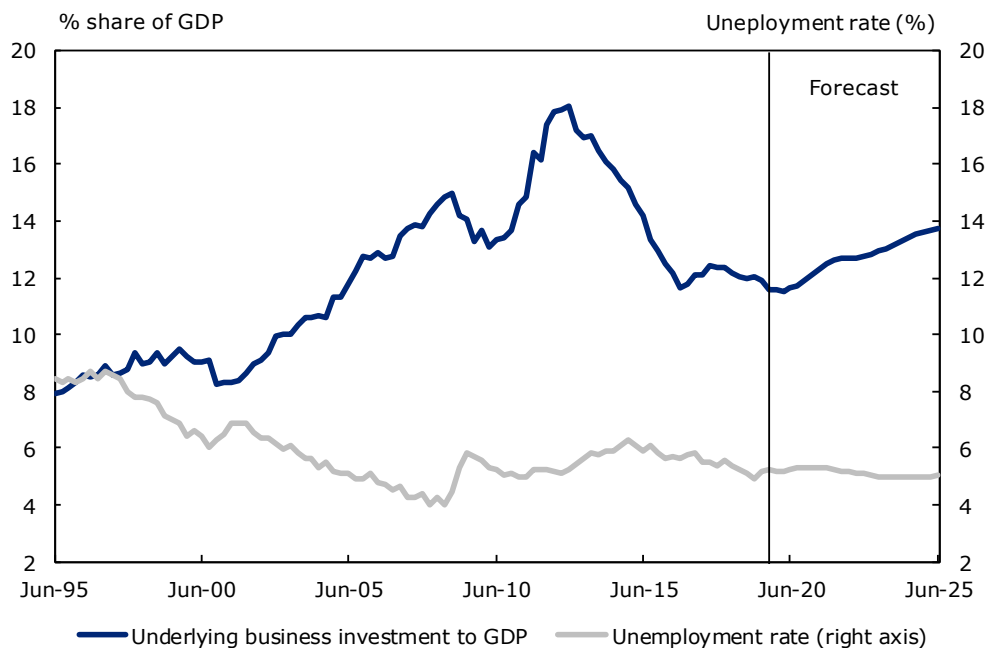
recover. In fact, while commodity prices remain elevated, they are already below mid-2019 peaks. This suggests that national income growth will continue to support the Australian economy, but to a lesser extent in coming years.

Even though confidence is low and economic risks are high, there are several factors supporting Australian economic growth. Property prices have begun to lift from their mid-2019 lows. According to CoreLogic, dwelling prices grew for the seventh consecutive month in January 2020 and are 4.1% higher over the year. Gains were particularly strong in Sydney (7.9% higher over the year to January 2020) and Melbourne (8.2%), while there was a broadening of the upswing among other capital cities and regional areas. Despite this, the number of residential dwellings approved fell by 18% in 2019, pointing to a further fall in housing construction in 2019-20. Thereafter the improvement in prices will drive stronger growth in consumer spending and housing construction.

The Commonwealth Government is providing income tax relief. The first stage, which began in mid-2018, gave a maximum tax cut of \$1,080 (and a base amount of \$255) a year to low and middle income earners. The second stage is scheduled to begin on 1 July 2022 and increases the top threshold of the 19% tax bracket from \$41,000 to \$45,000 and increases the low income tax offset from \$645 to \$700. Stage three is scheduled to begin in July 2024, applying a 30% tax rate to earnings between \$45,000 and \$200,000. Although the impact of the first stage of the tax cuts has been blunted by falling confidence and pressures on household budgets, the second and third stages of the tax package are much larger and are expected to further support household spending.

After maintaining the cash rate at 1.5% from August 2016 to May 2019 the RBA has since cut the rate to 0.25%. Despite the muted impact of interest rate cuts to date, record low rates are set to support consumer spending and improve the outlook for investment in Australia.

Chart 2.3 Business investment as a share of GDP and the unemployment rate



Source: ABS, Deloitte Access Economics.

There is now reduced pressure on bank funding costs. A key challenge during 2018 was that financial markets were demanding higher borrowing costs for the big banks, increasing the gap between the RBA's cash rate and bank borrowing costs. But that has reversed through 2019, meaning that any cuts from the RBA are more likely to be reflected in lower borrowing costs for families and businesses.

The Australian dollar has fallen to decade lows against the US dollar and is down against most currencies (measured by the 6% decline in the Trade Weighted Index over the year to December

2019). The Australian dollar is expected to slightly depreciate further amid an extended phase of low interest rates and forecast falls in commodity prices. The lower Australian dollar is expected to support the competitiveness of Australian exporters.

The Commonwealth Government and many state governments are investing record amounts on infrastructure. The Commonwealth Government has allocated \$100 billion over the next decade, New South Wales is spending \$76 billion over the next four years, Victoria \$56 billion over the next four years, while other states and territories have allocated significant amounts. This will support construction activity as well as private investment in the machinery and equipment needed to deliver major projects.

Overall, real GDP is expected to grow by 2.0% in 2019-20, before lifting to 2.4% in 2020-21. Growth in the Australian economy is then projected to reach a peak of 2.9% in 2022-23.

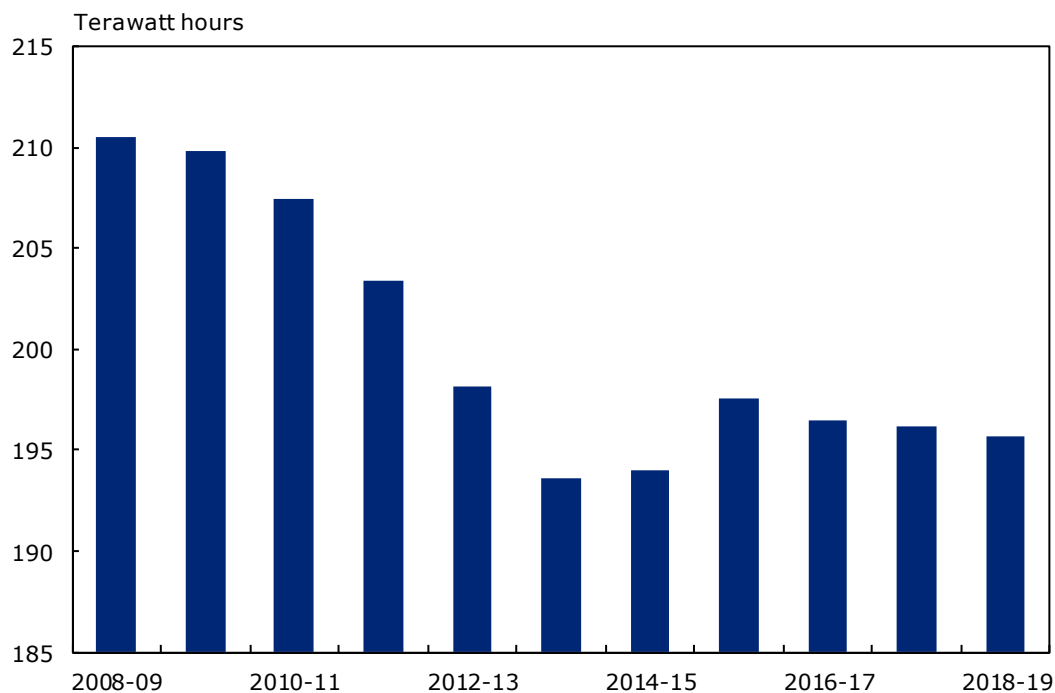
2.1.3 Utilities

The 'utilities' industry is the broad term applying to the electricity, gas, water and waste services industry, which is Division D of the Australian and New Zealand Standard Industrial Classification (ANZSIC). The industry covers activity in the provision of electricity; gas through mains systems; water; drainage; and sewage services.

Utilities industry output fell by 0.4% in the year to September 2019, below the 1.8% growth for the Australian economy as a whole. Activity fell in the electricity supply (-0.9%) and water supply and waste services (-0.4%) sub-industries, which together account for around 95% of industry output. Elsewhere, output in the gas supply sub-industry grew by 6.5% in the year to September 2019.

Growth in utilities industry output has underperformed growth in the wider economy from 2008-09 to 2018-19. This has largely been due to a 7% decline in NEM electricity consumption over the same period.

Chart 2.4 Electricity consumption in the NEM



Source: AEMO annual electricity consumption

Demand for grid-supplied electricity has been weighed down by a series of long-running trends. An increasing share of households and businesses have adopted rooftop PV, battery storage and other small-scale technologies to generate their own electricity. This has reduced the amount of electricity consumed from the grid. Households and businesses have also responded to elevated retail

electricity prices in recent years by actively modifying their behaviour to reduce electricity use where possible. There has also been a trend towards more energy efficient appliances, machinery and buildings. The changes in behaviour and improvements in energy efficiency have reduced overall electricity consumption as well as grid-supplied electricity consumption.

According to the Australian Energy Market Operator (AEMO), consumption of grid-supplied electricity is forecast to fall at an average annual rate of 0.4% in the five years to 2024-25. The continued growth in PV systems and improvements in energy efficiency (particularly in the residential and commercial sectors) are set to decrease the amount of electricity consumed from the grid over this period. This is set to outweigh the increase in grid-consumed electricity resulting from new connections the increased reliance on electricity from Australian households and businesses (e.g. gas to electricity switching, electric vehicle uptake, addition of new and larger capacity appliances, increased heating/cooling demand).

Wholesale electricity prices in the NEM fell by 19% in the year to Q4 2019, reaching a three-year low. This has been driven by three key factors. Firstly, supply from wind farms and solar farms increased following a record 36% gain in installed capacity through 2019. Secondly, gas-fired generation was supported by lower gas prices and outages at a number of coal-fired generators. And lastly, higher rooftop PV output reduced average daytime demand in the NEM. These factors outweighed the effect of electricity supply disruptions and record high temperatures.

Wholesale electricity prices are expected to fall further in the coming years. ASX futures prices for 2020 contracts have fallen by 15% in New South Wales, 12% in Queensland and 17% in South Australia. These lower wholesale prices are expected to flow through to retail electricity prices, with the Australian Energy Market Commission forecasting a 7.1% decrease in consumers' electricity bills in the three years to 2022.

Prices in the NEM are also set to be impacted by large increases in the supply of renewable energy generation. According to AEMO, almost 3,800MW worth of wind and solar generation projects are currently listed as committed, with 45,500MW listed as proposed. This far outweighs the 2,700MW of coal and gas-fired generation capacity that is expected to be withdrawn from the NEM in coming years. Despite this, the amount of energy that cannot be supplied to customers (USE) is expected to increase from 2022-23. USE is forecast to remain below the maximum threshold set by the Reliability Standard, but the balance between supply and demand is set to tighten – particularly in New South Wales.

The electricity sector faces a number of negative risks over the medium term:

- Continued uncertainty around energy policy settings means greater risk for private investors.
- An acceleration in the uptake of distributed energy resources such as rooftop PV and battery storage systems will weigh on NEM electricity demand.
- Further pressure on the manufacturing industry may see additional industrial electricity users choose to close local operations and move offshore.

There are also a number of upside risks, that may support growth:

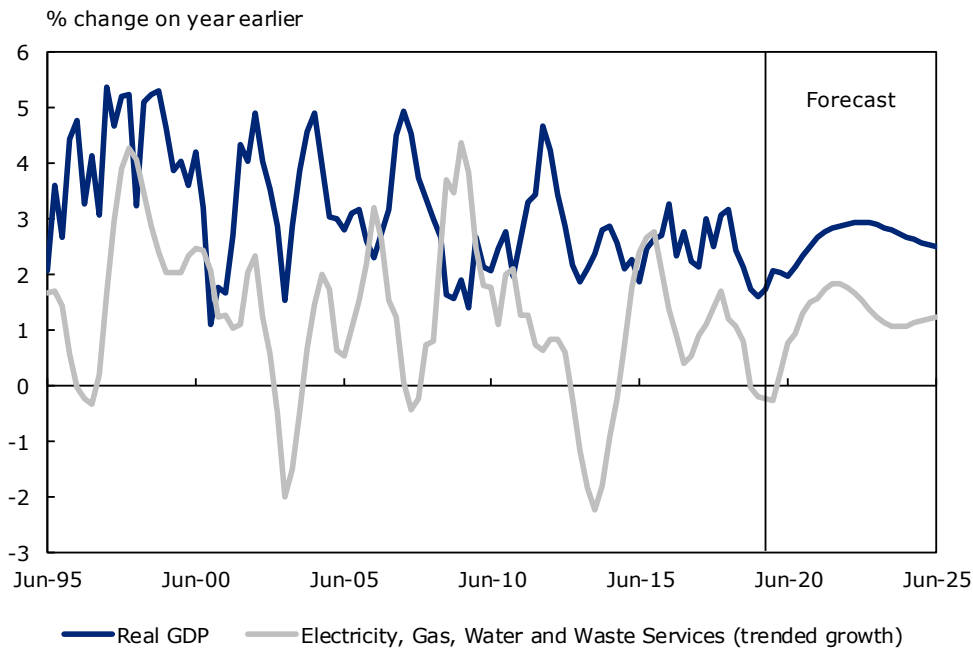
- An acceleration in the uptake of electric vehicles will increase NEM electricity demand. According to AEMO this will depend on government policies, electric vehicle costs relative to non-electric vehicles, other transport alternatives (e.g. public transport), commercial demand, access to charging infrastructure and the availability of car models in Australia.
- There is also the potential for higher demand from the business sector. This includes demand from traditional manufacturing, mining (particularly the gas and coal mining sub-industries), desalination plants and other services-based businesses (such as the transport industry).

According to the AEMO 2019 Gas Statement of Opportunities, gas consumption is forecast to grow at modest average annual rate of 1.1% in the five years from 2019 to 2024. Consumption from gas-fired power stations is set to decline over coming years as more renewable energy generation enters the NEM. However, this is being offset by growth in LNG exports and relatively stable demand from households and businesses.

The balance between gas supply and demand is set to remain tight in coming years. Despite this, falling gas production from southern fields is set to increase the reliance of southern states on gas from northern states from 2022. This should be facilitated by the opening of the Northern Gas Pipeline from Tennant Creek in the Northern Territory to Mount Isa in Queensland. The new pipeline is set to free-up capacity for gas to be delivered to southern states via the South West Queensland Pipeline. From 2024 the supply of gas is projected to be insufficient to meet demand – particularly in southern states. This is likely to require the development of new gas reserves or supply infrastructure.

Utilities industry output is expected to fall by 0.1% in 2019-20, below the 0.3% gain in 2018-19. Growth in utilities industry output is forecast to remain weaker than growth in the Australian economy over the forecast period to 2024-25 (see Chart 2.5). As a result, the utilities industry is forecast to fall as a share of national output and employment (see Chart 2.6).

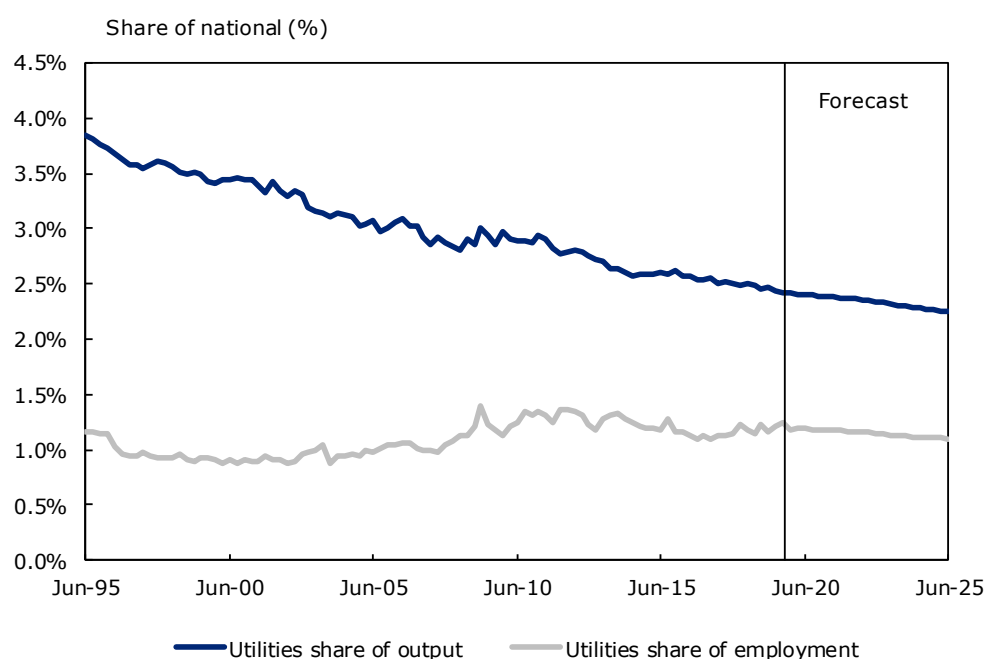
Chart 2.5 Utilities industry output and GDP



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Deloitte Access Economics.

Chart 2.6 Utilities share of national output and employment



Source: ABS, Deloitte Access Economics.

2.2 The outlook for wages

2.2.1 All industries

The WPI grew by 0.5% in the December quarter of 2019, to be 2.3% higher over the year. Wage gains remain above the lows seen in 2017, but the pace of growth has slowed in the second half of 2019. The flat spot in wage recovery is reflective of the following reasons:

- The Australian economy has weakened.
- The Reserve Bank and the Commonwealth Government have increased stimulus, but not by enough to lower unemployment and absorb spare capacity in the labour market.
- Revised estimates of full employment suggest that the unemployment rate needs to fall to 4½%, rather than 5%, before there is meaningful upwards pressure on wages.
- Productivity growth has been low.
- The confidence of both consumers and businesses has fallen amid bushfires and the spread of the COVID-19 coronavirus.

In 2019, wage gains were faster in the public sector (2.4%) compared to the private sector (2.3%). The fastest wage gains were also in industries in which the public sector plays a larger role, with gains of 3.1% in health care and 2.8% in utilities. At the other end of the scale, wage gains were weakest in the telecommunications industry (1.7%), as well as industries facing challenging conditions such as construction (1.8%), retail trade (1.9%) and manufacturing (1.9%). At the state level, wages grew the fastest in Victoria (2.7%) and Tasmania (2.4%). Wages grew the slowest in Western Australia (1.6%) and Queensland (2.1%).

Wage growth including bonuses and commissions continues to outperform, with total wage growth of 2.5% in 2019. RBA analysis suggests that the share of workers receiving a bonus has increased in recent years. In part this may be due to businesses using bonuses and commissions as a way of rewarding workers without locking in increases to their underlying wage bill – which can be difficult to wind-back when operating conditions worsen.

The share of workers receiving larger wage increases also appears to have fallen. According to the RBA, approximately one fifth of workers receive wage gains in excess of 3%, while close to one half of workers receive wage gains between 2% to 3%. There has also been a moderation in award wage increases. The Fair Work Commission's 2019 annual wage review saw award wages increase of 3% (effective from 1 July 2019), compared to the 2018 review figure of 3½%. Approximately one fifth of workers are on an award wage.

Broader measures of earnings have seen stronger growth than the WPI in recent quarters. Average compensation per employee grew by 2.9% over the year to the September quarter of 2019. This measure of earnings allows for changes in the composition of employment and includes non-wage payments such as superannuation, bonuses and allowances. The improvement in average compensation per employee reflects the fact that earlier employment trends (workers leaving high-paid mining-related jobs) have reversed of late (with a sharp acceleration in mining jobs), and that a greater proportion of earnings growth is appearing in the form of non-wage payments.

The minimum superannuation guarantee is set to increase from the current 9.5% to 10% on 1 July 2021, before increasing by 0.5 percentage points each year to an eventual 12% from 1 July 2025. Unlike some other – broader – measures of labour costs, the WPI does not directly include non-wage costs such as superannuation, but the increases to the superannuation guarantee will result in slower WPI growth than would have otherwise been the case. The impact of this will be gradual and spread over several years, particularly given the fact that wage growth remains subdued.

Looking ahead, there are a number of reasons to suggest that – beyond 2020 (and, in particular, beyond the phase of damage and uncertainty caused by the spread of COVID-19) – the pace of wage gains will accelerate from current levels:

- Growth in the Australian economy is expected to reach a trough in 2019-20, before lifting thereafter. This acceleration in economic growth will add to wage pressures in the economy.
- Continued employment gains are expected to absorb some of the spare capacity in the labour market. While recent employment gains have largely been met by an increase in labour force participation, this trend is likely to moderate in the short term. This tightening of labour market conditions will place downward pressure on unemployment and underemployment, leading to gradual improvements in wage growth.
- The Consumer Price Index (CPI) is forecast to lift from 1.7% growth in 2018-19 to 1.8% in 2019-20 before reaching 2.3% in 2024-25. Faster growth in inflation will eventually flow through to wages.
- Although national income growth is forecast to fall from current highs, it will recover to be solid over the forecast period to 2024-25. To date much of the gain in national income has been directed towards profits, but a greater share of national income is expected to flow through to wages as the labour market tightens.
- In the long run, demographic factors are also expected to add to wage pressures. The increasing retirement among baby boomers is set to restrain growth in the number of potential workers. This should hand employees back some bargaining power in wage negotiations, contributing to higher wage outcomes.

Although wage gains are expected to accelerate over coming years, there are also a number of structural and cyclical factors limiting the pace of this acceleration:

- The current slowdown in the Australian economy, high levels of household debt and increased uncertainty around the economic outlook may prompt employees to prioritise job security rather than wage increases.
- Businesses and employees may have lowered their wage growth expectations following the extended period of slow wage gains.
- RBA analysis has found that workers are now less likely to voluntarily change jobs compared to the mid-2000s. Wage growth is typically lower for workers who do not change employer.

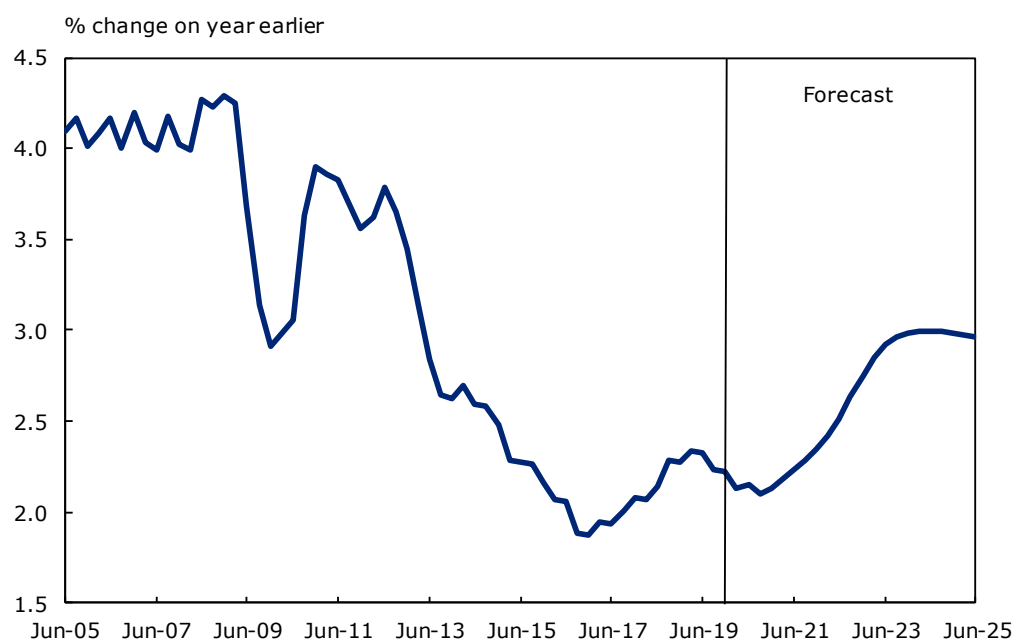
- Both globally and in Australia, economic growth is showing up more in profits and jobs than it used to, but less so in wages. In part, this is due to the fact that employers appear more cautious about adding to their wage bill amid concerns around low rates of economic growth and heightened uncertainty.
- Trends such as automation of work processes, an increase in contract work, and competitive pressures from the internationalisation of services trade have all combined to restrain workers' bargaining power. It is possible that these trends are making workers feel less secure about their future employment and less likely to push for larger pay rises.
- The returns to technological developments, which are increasingly focussed on intangible capital goods such as software and IT, tend to be highly concentrated in a few firms across a small number of sectors. Firms that are unable to innovate and take advantage of new technologies are often choosing to control costs as a way of remaining competitive. This cost-control approach can sit at odds with paying employees higher wages.

Deloitte Access Economics forecasts nominal wages to lift from 2.2% growth in both 2019-20 and 2020-21 to 2.4% in 2021-22, before reaching 3.0% in 2024-25. This represents a more gradual lift in wage growth when compared to forecasts in Report 3. That is largely reflective of:

- Slower than expected wage growth in 2019 (amid weaker than expected economic growth)
- The impact of the 2019-20 Australian bushfires and COVID-19.

Wage growth has been lowered by a cumulative 1.7 percentage points across the forecast period from 2019-20 to 2024-25.

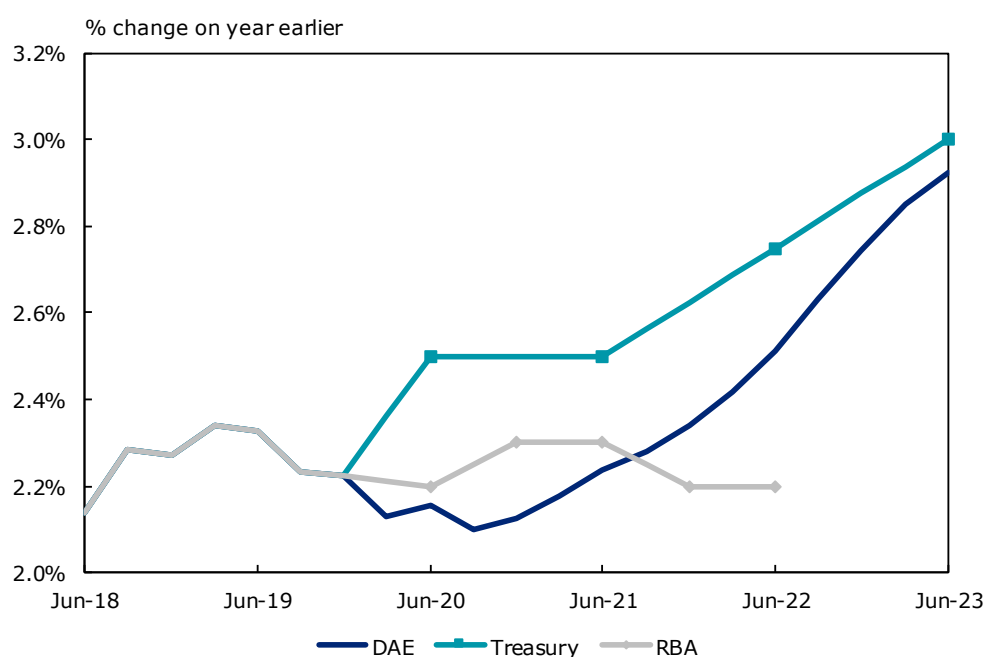
Chart 2.7 National WPI forecasts



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

By way of benchmarking, Deloitte Access Economics' forecasts are close to the latest released by the RBA in its February 2020 *Statement of Monetary Policy*, but continue to project a more gradual rate of pick-up in wage inflation than is envisaged in the Commonwealth Treasury forecasts published in the *2019-20 Mid-Year Economic and Fiscal Outlook* released in December 2019.

Chart 2.8 Comparison of national WPI forecasts by forecaster



Note: Markers indicate published forecasts, remaining data points have been imputed. Series are 'year-to' not 'year-average' growth rates.

Source: Commonwealth Treasury Mid-Year Economic and Fiscal Outlook 2019-20, Deloitte Access Economics, RBA February 2020 Statement of Monetary Policy.

Table 2.1 National wage forecasts

Financial year nominal wages forecasts

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Wage price index	2.3	2.2	2.2	2.4	2.8	3.0	3.0
Average weekly earnings	2.7	2.3	2.3	2.5	2.8	2.8	2.7
Ordinary time earnings	2.7	3.3	3.0	3.0	3.3	3.4	3.4
Unit labour costs	1.9	2.2	0.9	1.6	2.0	2.3	2.5

Financial year real wages forecasts

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Wage price index	0.6	0.4	0.3	0.4	0.6	0.6	0.7
Average weekly earnings	1.0	0.5	0.5	0.5	0.6	0.4	0.5
Ordinary time earnings	1.0	1.5	1.2	1.0	1.1	1.0	1.1
Unit labour costs	0.2	0.5	-0.9	-0.4	-0.2	-0.1	0.2

Source: ABS, Deloitte Access Economics.

2.2.2 Utilities industry wages

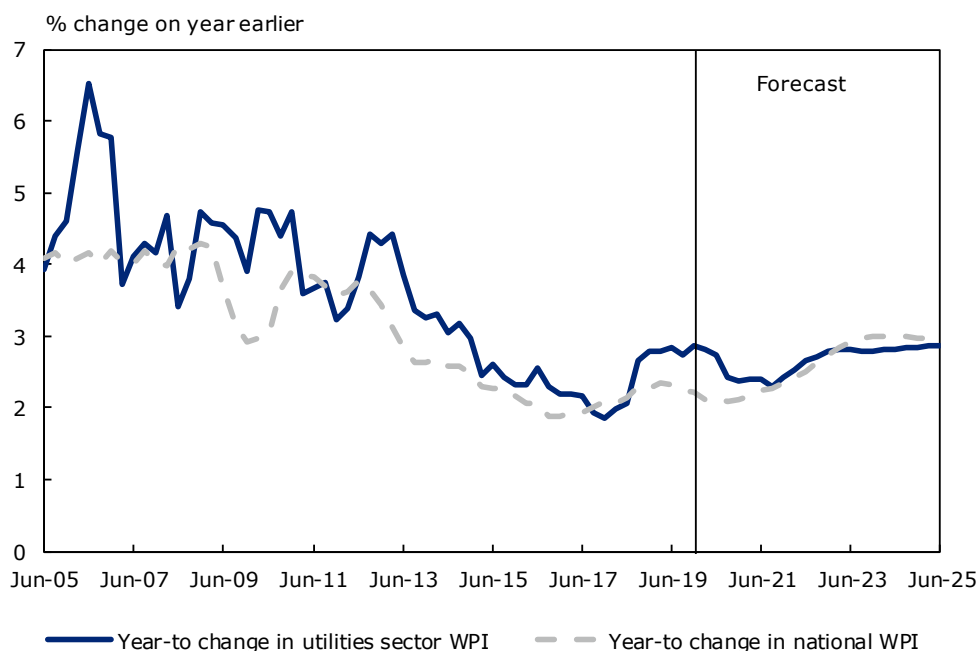
Utilities industry wages grew by 0.6% in the December quarter of 2019 to be 2.8% higher over the year. Wage gains have accelerated from a low in mid-2018 and are now at the highest rate seen since mid-2015.

The improvement in utilities wage gains continues to be sharpest in the private sector. Private sector utilities industry wage gains have accelerated from a low of 1.9% in March 2018 to 3.1% in December 2019, while public sector wages grew from 2.1% to 2.5% over the same period. This was initially due to the strength of private sector employment relative to public sector employment, but this trend has reversed through 2019. The continued strength of private sector wage gains through 2019 likely reflects the fact that labour market changes can take some time to flow through to

wages, that four times as many utilities employees work in the private sector than the public sector, and that public sector wages are more affected by trends in Enterprise Bargaining Agreements (EBAs) (where agreements can run for multiple years before being re-negotiated).

Wage gains in the utilities industry have outperformed wages in the wider Australian economy for much of the past decade (see Chart 2.9). Utilities industry wage gains fell below the national average from late 2017 to mid-2018. Since then utilities wages have recovered to grow at rates above the national average.

Chart 2.9 National utilities industry Wage Price Index forecasts



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Deloitte Access Economics.

The acceleration in utilities industry wages has not been driven by an improvement in the pace of growth in utilities industry output, which has remained below the growth in the wider economy since 2008-09. Measures of the level of utilities labour productivity (which make workers more valuable to businesses) have fallen over the past two years and remain more than two fifths below the peak seen in 2000-01. And conditions remain subdued in a number of industries that traditionally compete with the utilities industry for labour, with output falling in both the manufacturing and construction industries in 2018-19.

There are a number of potential explanations for the recent acceleration in utilities wages:

- Utilities employment growth remains elevated, helping to absorb spare capacity in the industry. Despite falling from a peak of 9.3% in the year to November 2018 to 2.8% in the year to November 2019, utilities employment growth remains above the 2.4% gain across all industries.
- Record levels of infrastructure investment have seen activity shift away from housing construction towards civil infrastructure construction. It is possible that there is a greater degree of substitutability between the skills required for civil construction and those used in the utilities industry, compared with housing construction and the utilities industry. This would add upwards pressure to wage gains in the utilities industry.
- Conditions in the mining industry have improved in recent years. Growth in output has increased from a low of 1.3% in 2016-17 to 6.2% in 2018-19, while growth in employment increased from -0.8% to 10.8% over the same period. The mining industry traditionally competes with utilities for labour, meaning that strength in the mining industry is likely to add upwards pressure to utilities wages.

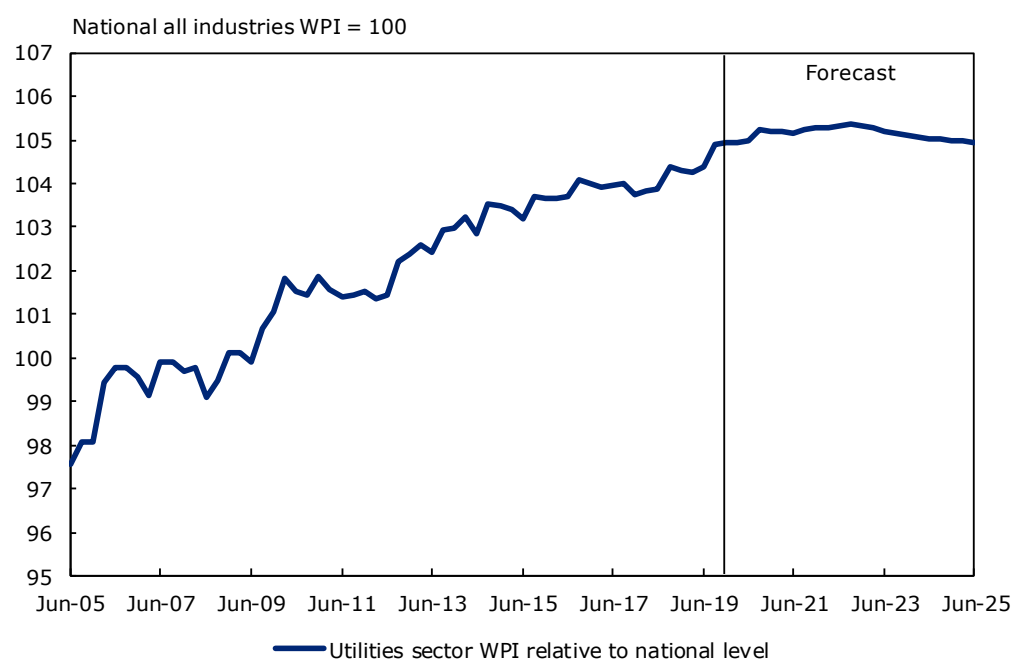
- The outperformance of wage gains in the utilities industry relative to the wider economy may reflect factors that are difficult to observe. For example, it is possible that wages have increased because requisite skills have lifted, but – if so – then better skilled workers have yet to boost industry output.

The utilities WPI is forecast to grow by 2.8% in 2019-20 before slowing to 2.4% growth in 2020-21 as utilities employment growth moderates and conditions in the civil infrastructure and mining industries fall from current highs. Utilities wages are then expected to grow at a marginally slower rate than the all industry average from 2023-24. This reflects the fact that utilities output is forecast to grow at a slower rate than the all industry average, while conditions in competitor industries will place limited upwards pressure on utilities wages. This is expected to outweigh the impact of unobserved changes in skills requirements in the long run.

Utilities industry wages are expected to be affected by the 2019-20 Australian bushfires and COVID-19. Bushfires are forecast to increase utilities industry employment during the rebuilding task, with this effect being concentrated in New South Wales and Victoria. COVID-19 is expected to negatively impact utilities industry wages. However, the impact will be most significant for industries that rely on exports (such as mining, manufacturing, education, tourism, etc.).

This represents a slight downward revision to utilities WPI growth from 2020-21 to 2022-23 when compared to the forecasts in Report 3. Utilities wage growth has been lowered by a cumulative 0.5 percentage points across the forecast period from 2019-20 to 2024-25. However, this is a smaller reduction than the 1.7 percentage point reduction seen in forecasts for wage growth across all industries. As a result, the utilities WPI relative to the national WPI is higher than previously forecast in Report 3. In part, the adjustment to the expected relativity between utilities WPI and national WPI reflects observed deviations between Deloitte Access Economics' past forecasts and actual outcomes.

Chart 2.10 Utilities Wage Price Index relative to National Wage Price Index



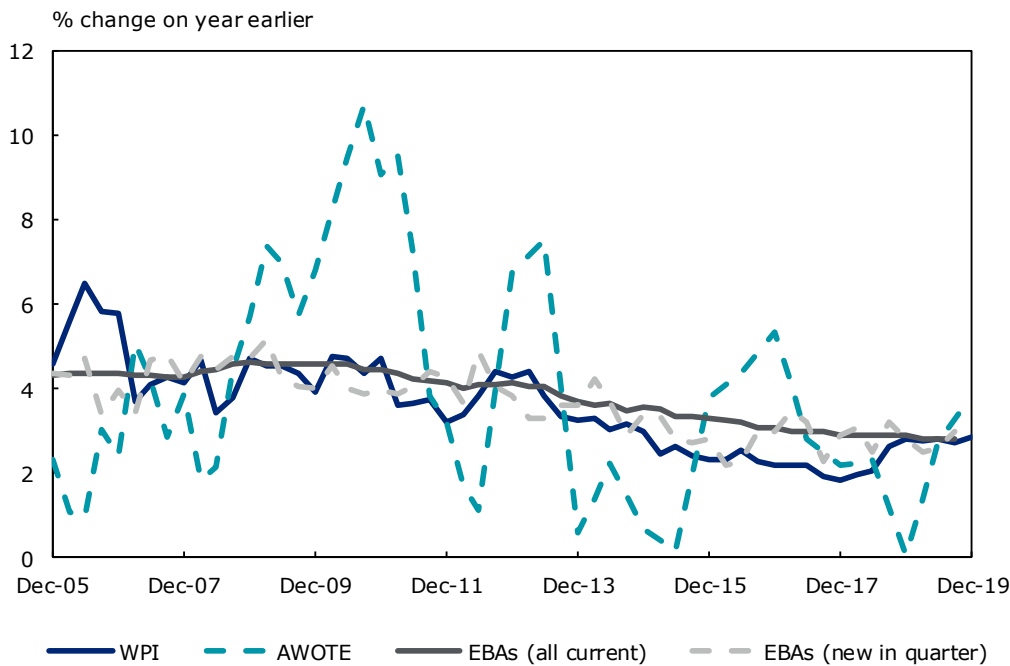
Source: ABS, Deloitte Access Economics.

2.2.2.2 Comparison with results from other wage growth measures

Chart 2.11 shows that, despite volatility in Average Weekly Ordinary Time Earnings (AWOTE), the downward trend in utilities WPI from 2006 to 2018 has been mirrored by several other wage growth measures that are produced on a regular basis.

These include EBAs sourced from the *Trends in Federal Enterprise Bargaining* publication produced by the Attorney-General's Department.

Chart 2.11 Measures of utilities industry wage growth



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Attorney-General's Department

The AWOTE series fluctuates considerably and is consequently limited in its use in forecasting wage growth. In the latest Average Weekly Earnings (AWE) publication released in November 2019, the ABS indicated that the biannual survey was “*designed to provide estimates of the level of average earnings at a point in time and, while not designed for movements in earnings, the frequency of collection supports a time series of these level estimates*”. Data on the average level of earnings is useful for comparing what an individual earns relative to the average. It is therefore used in the Deloitte Access Economics wage price model as an indicator only.

The utilities EBA data provides a good partial indicator of the future trend growth in the utilities WPI measure. Deloitte Access Economics considers EBA data in forecasting WPI, but it is not the primary driver.

As at the September quarter of 2019, there were 366 EBAs active in the utilities industry, covering some 51,600 employees. Wages in ‘all current EBAs’ grew at 2.8% for the utilities industry in the September quarter of 2018, below the 2.9% gain seen a year earlier. The average annualised wage increase (AAWI) in the utilities industry was above the 2.6% gain seen across all industries.

Wage growth in new utilities industry EBAs was 3.0% in the year to September 2019, above the 2.6% gain in June 2019. The AAWI remains below the 3.2% gain in September 2018, while new EBAs lodged in the September quarter of 2019 only covered 1,500 employees – the lowest number of employees covered since September 2016. As a result, any trend in stronger utilities EBA wage outcomes will need to continue for some time before it begins to add to the AAWI for all current EBAs in a meaningful way.

2.2.3 Labour productivity

Labour productivity measures the number of units of output an individual employee can produce in a given time period. The more units of output each worker can produce, the fewer workers are required to create a given level of industry output.

In this report, Deloitte Access Economics provides estimates of labour productivity at the national, state and industry level. The methodology used is presented in the Appendix of Report 1.

Labour productivity in the utilities industry has largely grown at a slower rate than productivity across the wider economy over the last two decades. Growth in utilities industry labour productivity fell by an average annual rate of 2.4% from 1998-99 to 2018-19.

Growth in utilities industry multifactor productivity (a measure of productivity that captures the difference in the growth of outputs and inputs such as capital and labour) has also been weak. Analysis from the Productivity Commission found that falling multifactor productivity growth was due to an increase in the ratio of peak to average electricity demand (which lowered rates of capacity utilisation), investment in capital assets (which temporarily increased inputs prior to growth in output), undergrounding electricity cabling (which raised costs and quality of service but not the volume of output) and a policy shift in favour of cleaner energy generation (which were initially higher-cost forms of generation). The impact of these factors has largely passed and multifactor productivity made solid gains from 2013-14 to 2016-17. However, these improvements have reversed, with declines in multifactor productivity in both 2017-18 and 2018-19. In part this has been due to higher labour costs in the utilities industry that have outweighed improvements in capital productivity.

In 2018-19, labour productivity fell by 0.5% in the utilities industry, compared to a 0.4% fall across all industries. Utilities industry labour productivity is forecast to remain flat in 2019-20 before lifting to 0.8% growth in 2020-21. This is largely due to the slowdown in utilities employment growth relative to utilities output growth. Utilities industry labour productivity is expected to closely track productivity in the wider economy over the medium term.

Forecasts for both national and utilities industry labour productivity have been revised down from 2020-21 to 2024-25 when compared to Report 3. Utilities productivity growth is cumulatively 2.8 percentage points lower over this period, compared to the matching 2.6 percentage point downward revision to productivity growth across all industries. The slower pace of labour productivity growth is due to the combined effect of stronger forecasts for employment growth and weaker forecasts for GDP growth. All industries employment is forecast to grow at a faster rate than in Report 3 from 2020-21 to 2024-25 (by a cumulative 2.4 percentage points), while GDP is expected to grow at a slower rate than in Report 3 from 2019-20 to 2020-21 and from 2022-23 to 2024-25 (a cumulative 0.7 percentage points). As labour productivity measures the amount of output produced per worker, a downward revision to output and an upward revision to the number of workers leads to slower labour productivity growth. The utilities industry is expected to follow a similar trend to the all industry average.

Table 2.2 Australian labour productivity forecasts

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
All industries	-0.4	0.0	0.7	0.7	1.0	1.1	1.2
Utilities	-0.5	0.0	0.8	0.8	1.0	1.1	1.2

Source: ABS, Deloitte Access Economics.

2.2.4 Summary results

Table 2.3 National industry wage forecasts

Financial year changes in nominal national industry sector WPI							
Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
All industries	2.3	2.2	2.2	2.4	2.8	3.0	3.0
Utilities	2.8	2.8	2.4	2.5	2.8	2.8	2.9

Financial year changes in real national industry sector WPI							
Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
All industries	0.6	0.4	0.3	0.4	0.6	0.6	0.7
Utilities	1.1	1.0	0.6	0.4	0.6	0.4	0.6

Financial year changes in labour productivity forecasts							
Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
All industries	-0.4	0.0	0.7	0.7	1.0	1.1	1.2
Utilities	-0.5	0.0	0.8	0.8	1.0	1.1	1.2

Source: ABS, Deloitte Access Economics.

3 New South Wales

3.1 Economic outlook

3.1.1 Overview

Growth in the New South Wales economy has moderated recently amid the continued slowdown in housing construction and weaker confidence that is weighing on consumer spending. State final demand (SFD) grew by 1.4% over the year to September 2019, below the 3.5% growth seen in the prior year.

Government infrastructure spending has been the key driver of the state's growth over the past year, offsetting some of the weakness in the private sector. New South Wales accounts for more than one fifth of all engineering work in the nation and around two fifths of all work done in the transport sector. Over the next four years the State Government plans to spend \$76 billion across capital projects, maintaining a strong pipeline to support activity. Public consumption has also been supported by the roll-out of the National Disability Insurance Scheme (NDIS) and other front line service improvements.

From 2013 to 2017 the value of residential building work done in New South Wales increased by almost two thirds. Strong population growth, low interest rates and an undersupply of dwellings contributed to strong growth in property prices and prompted the construction of new dwellings. Over this period, housing construction emerged as a key driver of the state's economy. This trend has since reversed with housing construction falling through 2019.

Housing construction is expected to weigh on the New South Wales economy in 2020. The number of new dwellings approved – a key forward looking indicator – fell by more than one fifth in 2019. Concerns around building quality in new developments, uncertainty over global and domestic economic conditions, and the large pipeline of new dwellings added in Sydney over recent years are set to weigh on activity in the sector. These factors are set to outweigh the positive impact of higher property prices in the short term. According to CoreLogic, Sydney property prices increased by 7.9% over the year to January 2020. The improvement in property prices and continued population growth will see housing construction return to positive growth from 2021.

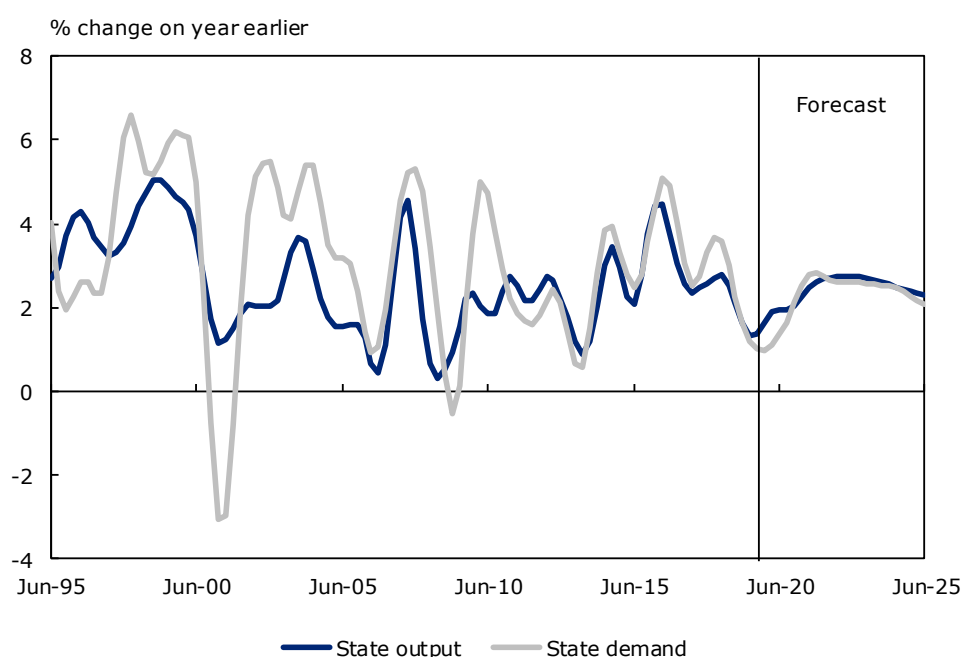
The New South Wales economy has also been affected by the protracted drought in eastern Australia. According to the New South Wales Department of Primary Industries, more than one half of the state is experiencing 'intense drought'. This has weighed on rural exports and farm incomes, with suggestions from the Bureau of Meteorology that the drier than average conditions could continue until the end of 2020. The recent bushfires also add to the uncertainty and could detract from growth in early 2020.

The state's labour market has remained robust with the unemployment rate at 4.5% in January 2020, below the national figure of 5.3%. In recent months the pace of employment growth has slowed somewhat. Despite this, more than 40,000 new jobs were added in the New South Wales economy in the year to January 2020. The labour market is expected to continue tightening over the coming years, adding upwards pressure to wages in the state.

Growth in consumer spending is set to be supported by the recent falls in interest rates and the rebound in housing prices. However, weak wage growth and record levels of household debt will partly offset those positives.

Overall, domestic and international headwinds will continue to weigh on growth, but conditions will be supported by the large pipeline of infrastructure projects and the recovery in the housing sector. Growth in the New South Wales economy is expected to fall from 1.9% in 2018-19 to 1.7% in 2019-20, before accelerating to a 2.2% gain in 2020-21.

Chart 3.1 Output and demand (change on year earlier), New South Wales



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Deloitte Access Economics.

Table 3.1 New South Wales economic forecasts

Annual % change (unless noted)	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Consumption							
Private sector	1.8	0.9	1.7	2.0	2.2	2.2	2.3
Public sector	5.5	6.6	2.6	1.2	1.3	1.3	1.4
Private sector investment							
Dwelling investment	-3.6	-13.4	-2.8	4.8	8.2	2.1	-3.6
Non-residential building	6.7	5.0	3.9	2.5	-0.8	2.2	2.5
Engineering construction	4.8	0.2	-1.8	0.4	-1.8	0.8	1.4
Machinery and equipment	4.2	-5.4	15.4	11.1	6.1	7.0	6.6
IP and livestock	5.7	8.8	8.1	9.9	5.5	9.3	9.3
Public investment							
General Government	11.7	5.0	-0.1	2.8	3.3	2.6	3.1
Public enterprises	-11.5	-9.4	1.3	2.4	1.3	3.1	2.7
Real final demand							
Private sector	1.2	-0.2	2.3	3.1	2.9	2.8	2.4
Public sector	5.4	5.4	2.1	1.5	1.6	1.6	1.8
Gross State output							
	1.9	1.7	2.2	2.7	2.7	2.6	2.4
Employment							
	3.5	1.7	1.3	1.9	1.7	1.5	1.1
Unemployment rate (%)							
	4.5	4.5	4.8	4.7	4.6	4.5	4.5

Note: All variables (except for jobs and unemployment) expressed in inflation adjusted terms.

Source: ABS, Deloitte Access Economics.

3.1.1 Utilities

Utilities industry activity rose by 0.6% in 2018-19, down from 2.8% in the prior year. Demand eased slightly while prices remained elevated. The state experienced milder peak temperatures outside of summer and rooftop PV generation increased.

Coal accounts for over 80% of the electricity generated in New South Wales. Coal-fired generation decreased by almost 700MW in the year to the December quarter of 2019. This was driven by coal supply issues at Mt Piper power station, planned outages at Bayswater, while generation at Eraring power station was affected by lower daytime demand due to solar generation.

Renewable energy sources are expected to account for a larger share of the state's energy mix in coming years. Four of the five coal-fired generators are set to reach the end of their technical lives by 2035, with the 2,000MW Liddell Power Station set to close by April 2023. Ageing generators tend to be more susceptible to outages, increasing the need for new investment. According to AEMO there are approximately 100 renewable energy projects currently in planning across the state, potentially adding a combined 17,400MW worth of generation in New South Wales. However, only 3,100MW of this investment is in the latter stages of planning – led by the Snowy Hydro 2.0.

Hydro generation in New South Wales increased over the year to the December quarter of 2019. This occurred despite 2019 being the driest year on record for Australia. The increase was largely due to a recovery in output from Upper Tumut. Output from Snowy Hydro fell, but dam levels have increased slightly over the year. Main construction works are expected to commence on Snowy Hydro 2.0 in 2020. The project is expected to increase generation capacity by 2,000MW upon completion in the mid-2020s.

The ongoing shift to rooftop PV generation reduced average operational demand in 2019. The increasing number of rooftop solar installations – now at almost half a million households and small businesses in New South Wales – means more electricity being sold back to the grid. This can pose problems because the grid was originally designed for electricity to be sold from large generators to households and not in the opposite direction.

The NSW Government's Electricity Strategy, launched in November 2019, is aimed at lowering electricity bills, driving private investment and increasing renewable energy penetration. The Strategy includes a framework to ensure the construction of new generation capacity to replace existing power stations and an Energy Security Target to cope with unexpected outages during periods of peak demand.

To develop the state's renewable energy output the New South Wales Government is launching Australia's first renewable energy zone. The initial 3,000MW zone, due to commence construction in 2022, is expected to produce enough energy to power up to 1.3 million homes every year. Other renewable energy zones are planned in New England and the South-West regions, with the potential for these zones to support up to \$23 billion in private sector investment.

Other recent developments include a deal agreed to in early 2020 between the New South Wales and Commonwealth governments to increase the state's gas supply by 70 petajoules – approximately 60% of current supply - in return for financial support from the Commonwealth for a range of electricity network upgrades and renewable energy investment.

The Commonwealth Government will also contribute to the renewable energy zone which will require transmission upgrades to link the new generation into the existing grid. Overall, the Commonwealth will contribute around \$2 billion in grants and loans while the state government will contribute \$1 billion in funding.

New South Wales utilities output is expected to strengthen in 2019-20 before accelerating through to 2021-22. Growth in New South Wales utilities output is then projected to slow alongside the moderation in national utilities output growth.

3.2 Outlook for wages

3.2.1 All industries

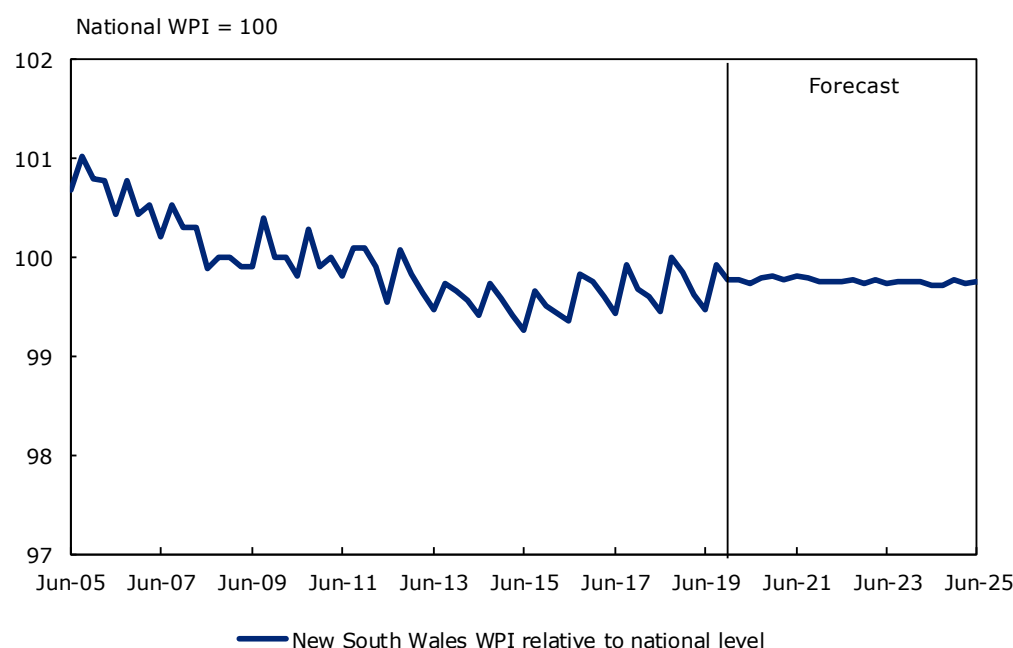
The New South Wales WPI grew by 2.2% in 2019, slightly below the 2.3% gain in 2018. This moderation has largely been driven by slower growth in the state's economy.

From 2005 until 2015 there was a slight decline in the New South Wales WPI relative to the national figure. This largely reflected rising output and wages in resource rich states such as Queensland and Western Australia during the mining boom (Chart 3.2).

Relative wage gains in New South Wales have recovered from a trough in mid-2015. The relative wage increases are partly due to the relative weakness of other state and territories economies compared to the New South Wales economy. More recently, the end of the housing boom and the slowdown in infrastructure investment has brought the New South Wales economy, and wages, to be more in line with national trends.

Looking ahead, wages are forecast to remain in line with the national level as the New South Wales economy is expected to grow at approximately the same rate as the national economy.

Chart 3.2 New South Wales WPI relative to national WPI

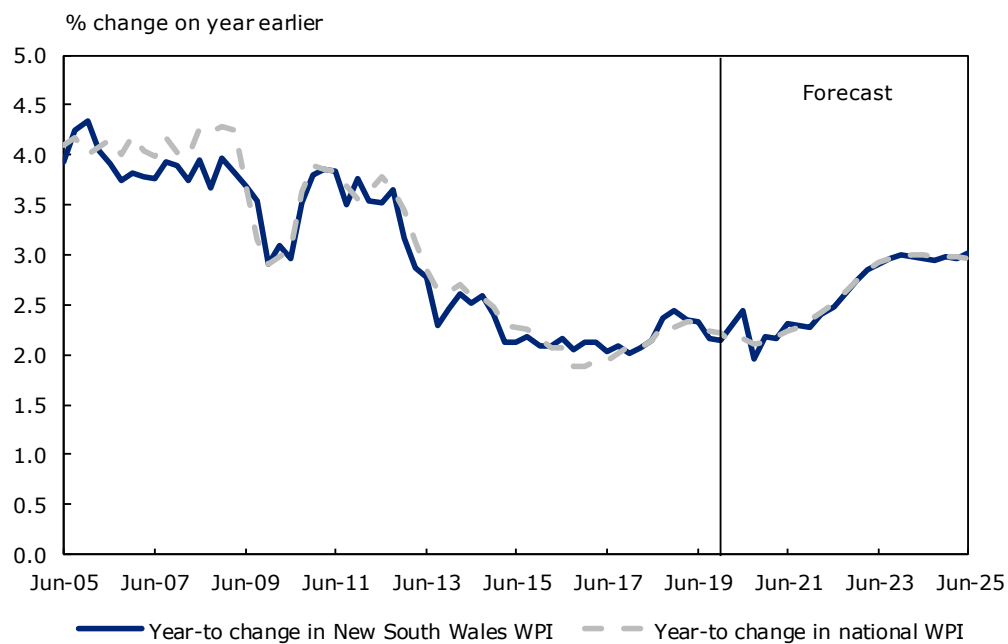


Source: ABS, Deloitte Access Economics.

Wage growth is expected to remain relatively low at 2.3% in 2019-20 and 2.2% in 2020-21. Wage growth in New South Wales is forecast to lift to 3.0% by 2024-25, as economic growth rebounds and eventually lifts wages. However, activity is forecast to eventually rebound after this and boost wage growth.

These forecasts represent a more gradual lift in wage growth when compared to those in Report 3. Overall, despite reaching the same 3.0% WPI growth in 2024-25, wage growth has been lowered by a cumulative 1.5 percentage points across the forecast period from 2019-20 to 2024-25 largely reflecting weaker than expected results over the last year.

Chart 3.3 New South Wales general WPI growth



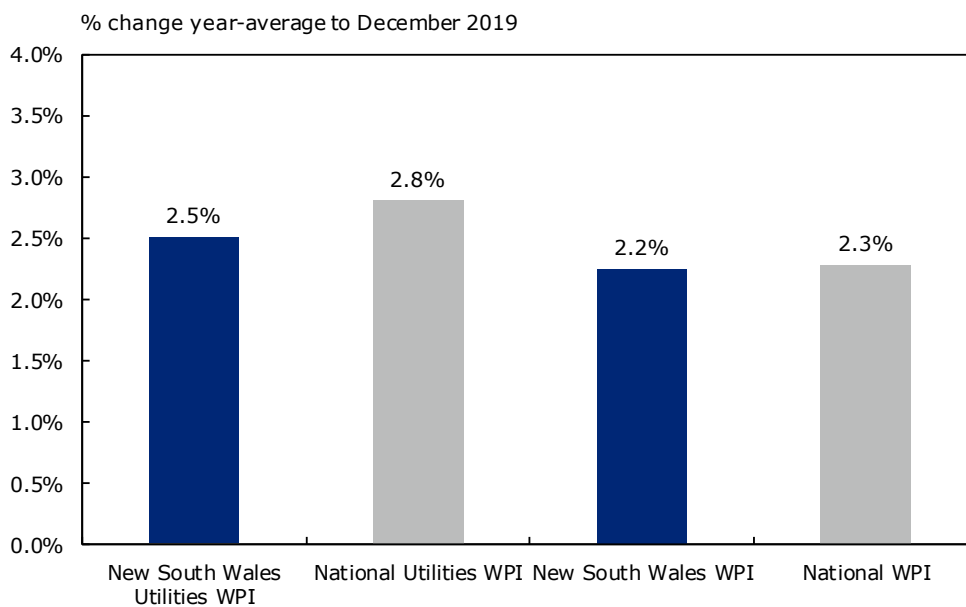
Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
 Source: ABS, Deloitte Access Economics.

3.2.2 Utilities industry wages

As the largest state by population, New South Wales comprises a substantial share of national utilities output. Therefore, New South Wales and national utilities industry wages often follow similar trends. However, at the state level there may be greater volatility in utilities output, particularly over the short term.

Wages in the New South Wales utilities industry grew by 2.5% in 2019 (see Chart 3.4). This is below the national average for the utilities industry of 2.8%, but remains slightly above the New South Wales all industry average of 2.2%.

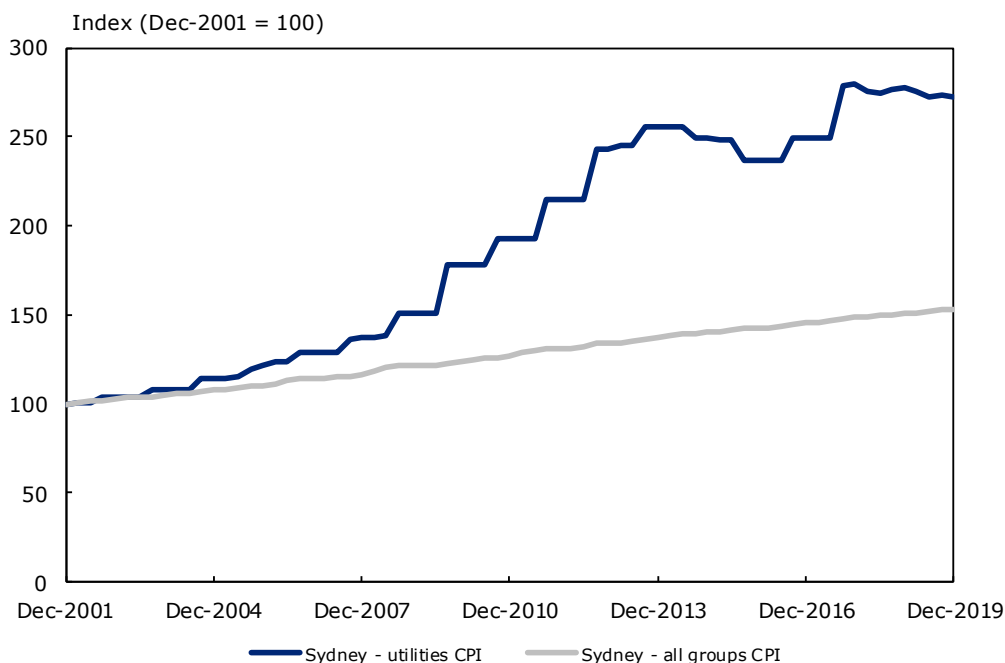
Chart 3.4 Comparative WPI annual growth rates in year to December 2019



Source: ABS, Deloitte Access Economics.

Utilities prices have remained relatively flat since a jump of almost 12% in the September quarter of 2017 (see Chart 3.5). Over the year to December 2019, the utilities CPI fell by 1.0% compared to a 1.6% increase across all groups. Utilities CPI remains above the CPI for all groups following a 66% increase over the past decade, compared to 24% growth in the broader Sydney CPI.

Chart 3.5 Sydney utilities prices

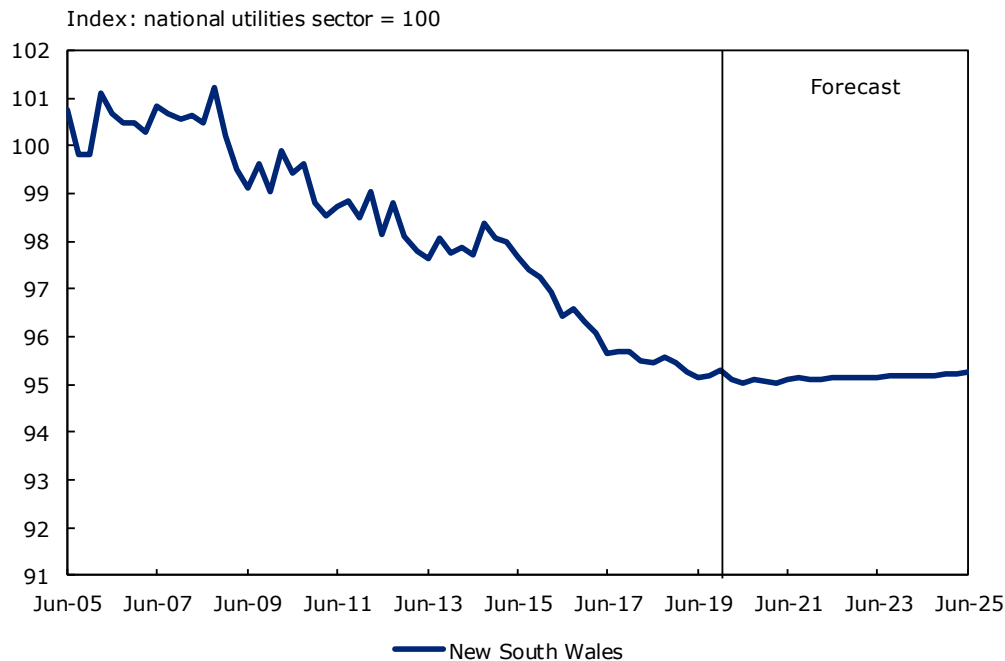


Source: ABS.

New South Wales utilities industry WPI relative to the national utilities industry WPI has been declining since 2009, coinciding with relatively weaker economic conditions compared to resource rich states (see Chart 3.6). Output from the utilities industry in New South Wales has also

underperformed relative to the national level, contributing to declining relative wages in the industry. Since 2017 there has been some convergence between national and state utilities output growth, leading to a steadying of relative utilities industry WPI.

Chart 3.6 New South Wales utilities WPI relative to national utilities WPI



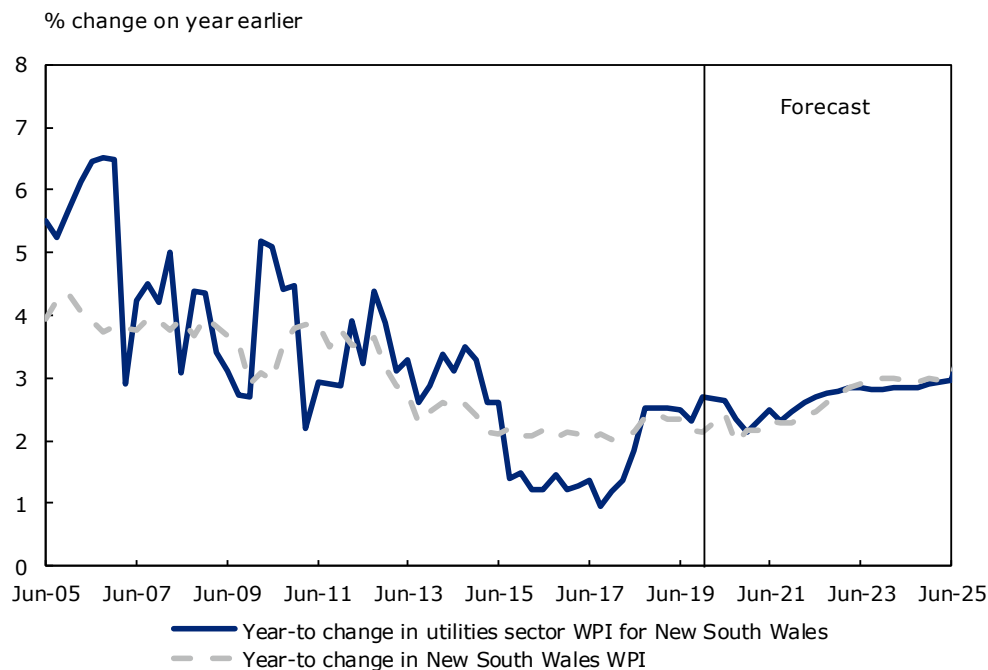
Source: ABS, Deloitte Access Economics.

Wage growth for the New South Wales utilities industry has generally been below levels in the overall state economy because growth in the utilities industry has lagged that of the broader economy. However, slower growth in parts of the state economy has meant output growth in utilities is stronger relative to the broader economy, leading to some convergence in wages.

Wages in the New South Wales utilities industry are expected to maintain a similar growth rate to the state average across the forecast period to 2024-25. This is largely driven by the fact that New South Wales utilities output is expected to grow at a similar rate to the national average.

New South Wales utilities wages are forecast to grow by 2.6% in 2019-20 before falling to 2.3% in 2020-21 alongside the slowdown in national utilities wage growth. Wage gains are then expected to accelerate, reaching 2.9% growth in 2024-25. These forecasts show a more gradual rebound in wages compared to those in Report 3. Overall, forecasts for utilities industry wage growth have been lowered by a cumulative 0.9 percentage points across the forecast period from 2019-20 to 2024-25.

Chart 3.7 New South Wales utilities general WPI growth



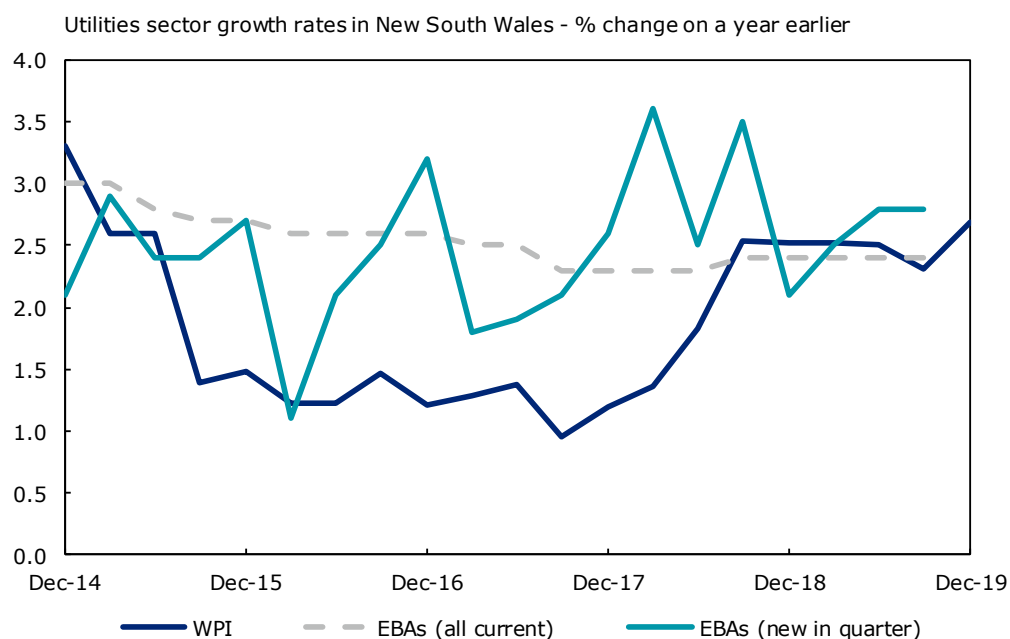
Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
 Source: ABS, Deloitte Access Economics.

3.2.2.2 Comparison with EBA outcomes

There were 98 current EBAs in the utilities industry in the September quarter of 2019, covering around 15,300 employees, with an AAWI of 2.4%. Chart 3.8 shows the utilities industry WPI and the outcomes in state EBAs for the industry. The chart shows:

- The AAWI across all current utilities EBAs in New South Wales has remained steady over the past year, but has declined slightly over the past five years.
- The AAWI for new utilities industry EBAs in New South Wales has increased from 2.1% in December 2018 to 2.8% in September 2019. However, the 12 agreements signed in this quarter covered only around 400 workers with wage increases still below the recent high of 3.6% in March 2018.

Chart 3.8 Comparative measures of wage growth in the New South Wales utilities industry



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Attorney-General's Department

3.2.3 Labour productivity

Labour productivity is forecast to remain flat in 2019-20, following declines across all measures in 2018-19. The improvement comes despite the slowdown in output growth which is expected to be offset by a larger slowdown in employment growth in the state and the utilities industry. Overall employment growth in New South Wales is set to slow from 3.5% in 2018-19 to 1.7% in 2019-20, resulting in higher productivity.

Labour productivity for the New South Wales utilities industry is forecast to return to moderate growth in 2020-21 and steadily increase through to 2024-25. Growth in New South Wales utilities output is projected to outpace growth in employment over the forecast period, placing upwards pressure on measures of labour productivity.

Table 3.2 New South Wales and national labour productivity forecasts

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
New South Wales - All industries	-1.5	0.0	0.8	0.8	1.0	1.1	1.2
New South Wales - Utilities	-0.9	0.0	0.9	0.8	1.0	1.1	1.2
National - All industries	-0.4	0.0	0.7	0.7	1.0	1.1	1.2
National - Utilities	-0.5	0.0	0.8	0.8	1.0	1.1	1.2

Source: ABS, Deloitte Access Economics.

Note: Productivity forecasts at the state level should be interpreted with care. Quarterly State Final Demand data is used to estimate quarterly GSP, which may not fully capture the impact of interstate trade. This can lead to some volatile movements in the first forecast year for state productivity.

3.2.4 Summary results

Table 3.3 New South Wales and national wage forecasts

Financial year changes in New South Wales and national nominal Wage Price aggregates							
Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
New South Wales - All industries	2.4	2.3	2.2	2.4	2.8	3.0	3.0
New South Wales - Utilities	2.5	2.6	2.3	2.5	2.8	2.8	2.9
National - All industries	2.3	2.2	2.2	2.4	2.8	3.0	3.0
National - Utilities	2.8	2.8	2.4	2.5	2.8	2.8	2.9

Financial year changes in New South Wales and national real Wage Price aggregates							
Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
New South Wales - All industries	0.7	0.5	0.3	0.4	0.6	0.6	0.7
New South Wales - Utilities	0.9	0.8	0.5	0.5	0.6	0.4	0.6
National - All industries	0.6	0.4	0.3	0.4	0.6	0.6	0.7
National - Utilities	1.1	1.0	0.6	0.4	0.6	0.4	0.6

Source: ABS, Deloitte Access Economics.

4 Queensland

4.1 Economic outlook

4.1.1 Overview

Queensland SFD grew by 1.1% in the year to September 2019, below the 3.2% growth seen in the previous year. Growth has been affected by the moderation in dwelling investment, weaker consumer spending, a moderation in business investment as well as the impact of the prolonged drought in southern Queensland and floods in northern Queensland. Conditions are expected to improve amid a recovery in business investment, strong employment growth and continued gains in exports.

Falling housing construction continues to weigh on the Queensland economy. Private housing investment is estimated to have fallen by 2.3% in 2019, with further falls expected in 2020. The number of new dwelling units approved – a key leading indicator of construction activity – fell by more than one quarter in 2019. Despite this, property prices have returned to positive growth in Queensland. According to CoreLogic, the value of dwellings in Brisbane grew by 1.1% over the year to January 2020, while dwellings in regional Queensland grew by 2.0% over the same period. This improvement in property prices will eventually flow through to construction activity.

Private consumption is estimated to have slowed from 2.6% growth in 2018 to a gain of 1.9% in 2019. Although employment growth has remained robust and wages have improved slightly, this has been offset by slower growth in house prices and heightened uncertainty around global and domestic economic conditions. Growth in private consumption is forecast to remain subdued in 2020 before accelerating in 2021.

Queensland has been affected by drought conditions in the south of the state as well as floods in the north of the state. Rainfall is expected to remain below-average in the short term, weighing on crop production. The drought and floods have also led to a reduction in the Queensland cattle herd. As a result, beef production may take some time to recover as graziers restock when conditions improve.

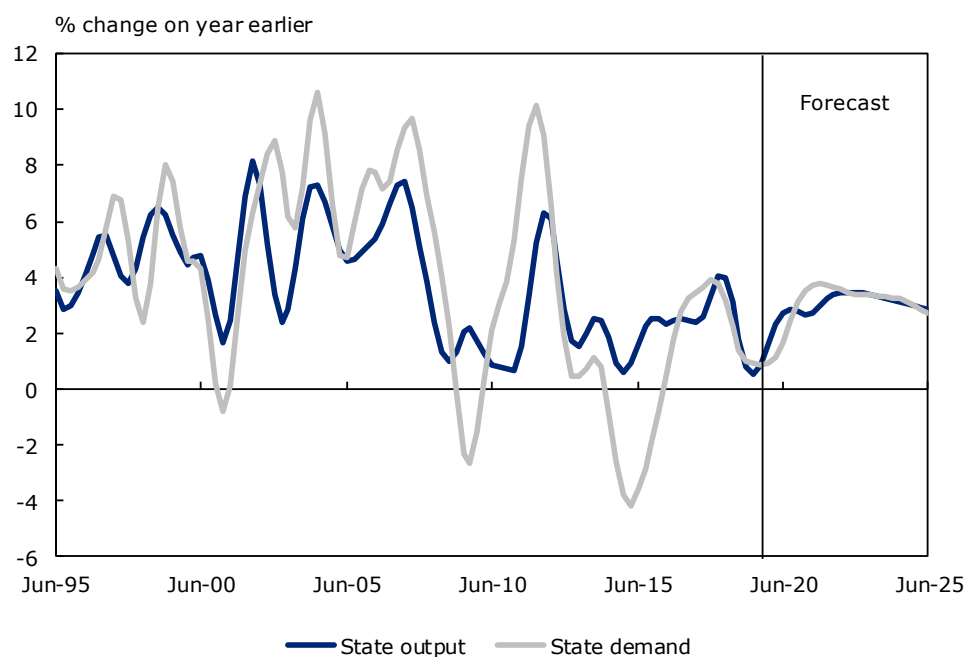
The slowdown in the global economy has impacted Queensland's export sector. Growth in goods exports fell from 4.2% in 2018 to an estimated 3.9% in 2019. Trade tensions have weighed on manufacturing activity in Asia and demand for Queensland resource commodities such as metallurgical coal and base metals. LNG export volumes have continued to rise, supported by a combination of higher prices and a lower Australian dollar. Queensland services exports have remained strong over 2019, but international visitor arrivals and student commencements are likely to moderate in the short term due to the impact COVID-19 and the wider slowdown in economic activity in key Asian markets.

The Queensland population is estimated to have grown by 1.7% in 2019, the second fastest rate of growth of any state or territory and above the estimated 1.5% gain in the Australian population. This strength has flowed through to the state's labour market. Queensland employment grew by 1.9% over the year to January 2020. The participation rate has increased as more people are encouraged to enter or re-enter the workforce. This has seen the unemployment rate fall from a mid-2019 peak of 6.4% to 6.1% in January 2020. Queensland population and employment growth is set to remain robust over the coming years, supporting the recovery in private consumption and housing investment.

Private business investment is estimated to have fallen in 2019. New engineering construction fell as construction wrapped up at a number of renewable energy projects across the state, while commercial construction was affected by heightened uncertainty in the domestic economy and slower rates of economic growth. These negatives outweighed a gain in machinery and equipment investment. Looking ahead, investment is set to be supported by an improvement in the Queensland economy, lower interest rates and a tightening of capacity utilisation.

Deloitte Access Economics forecasts Queensland output growth to increase from 1.4% in 2018-19 to 1.9% in 2019-20. Output growth is projected to accelerate to 2.7% in 2020-21 before reaching a peak of 3.4% in 2022-23.

Chart 4.1 Queensland output and demand



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Table 4.1 Queensland economic forecasts

Annual % change (unless noted)	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Consumption							
Private sector	2.1	1.6	2.2	2.6	2.7	2.7	2.9
Public sector	4.2	4.8	3.6	1.7	1.8	1.9	1.9
Private sector investment							
Dwelling investment	-1.8	-7.7	-0.3	10.8	12.1	4.8	-1.7
Non-residential building	-14.9	-9.6	8.8	6.6	3.6	6.2	5.8
Engineering construction	-11.0	-19.3	4.5	4.8	3.0	4.7	4.1
Machinery and equipment	5.1	3.9	7.8	9.0	5.9	7.6	7.3
IP and livestock	3.4	4.5	8.9	10.6	5.1	8.0	8.3
Public investment							
General Government	8.6	0.2	4.3	4.2	2.8	2.7	2.4
Public enterprises	-0.4	5.2	8.6	8.2	5.4	5.2	4.2
Real final demand							
Private sector	0.1	0.2	3.0	4.1	3.8	3.7	3.2
Public sector	4.6	4.1	4.0	2.4	2.2	2.2	2.2
Gross State output	1.4	1.9	2.7	3.3	3.4	3.2	3.0
Employment	1.6	2.0	2.1	2.5	2.3	2.0	1.6
Unemployment rate (%)	6.1	6.3	6.3	6.1	5.8	5.7	5.6

Note: All variables (except for jobs and unemployment) expressed in inflation adjusted terms.
Source: ABS, Deloitte Access Economics.

4.1.2 Utilities

Queensland utilities industry output grew by 0.5% in 2018-19, below the 4.5% gain in 2017-18. Conditions in the electricity sector have been affected by increased energy generation from rooftop PV, which continues to see increased uptake by households. Primary energy consumption in Queensland has typically grown at a faster rate than the national level since 2011-12, although 2015-16 and 2017-18 saw that trend reverse marginally.

Coal accounted for almost 75% of electricity generated in Queensland in 2018. However, Queensland's black coal-fired generation fell by approximately 369MW over the year to the December quarter of 2019, a 4.5% decrease. In large part, this has been due to unplanned outages, the increased use of rooftop solar PV and the addition of a number of large-scale solar projects to the NEM.

Queensland average wholesale electricity prices fell by 23% in the year to the December quarter of 2019. This decline was driven by increased output from grid-scale wind and solar generation, higher output from gas-fired power stations and lower daytime grid demand amid increased rooftop PV output. Queensland has now had the lowest average wholesale electricity prices of any state in the NEM since mid-2016.

The increased reliance on renewable energy generation has also changed the way Queensland's coal-fired power fleet is being deployed. A number of coal-fired power stations are reducing output during the day when zero marginal cost renewable generation is abundant before returning to higher output during evening peak times.

Queensland's maximum electricity demand was approximately 9,400MW in the December quarter of 2019, below the record high of 10,000MW reached in early 2019. This was largely due to Queensland's mild spring conditions. Average operational demand remained relatively flat over the year to the December quarter of 2019, as higher overnight demand was offset by lower daytime demand (amid stronger rooftop PV output).

Future generation projects in Queensland are concentrated in the renewables sector. A total of approximately 18,600MW worth of projects are listed as either committed or proposed by AEMO, more than 70% of which are in the solar sector (excluding rooftop PV). There are also a number of large-scale wind farms in Queensland. These include the Coopers Gap wind farm, which is set to add 453MW to the NEM upon completion in 2020.

The Powering Queensland Plan outlines the actions to be undertaken by the Queensland Government to maintain energy security and reliability, transition to a low-carbon energy sector and stabilise electricity prices. The Government has committed to a 50% renewable energy target by 2030 and aims to reduce emissions as well as plan for a changing climate.

The Queensland Government announced a new initiative as part of its plan to support electric vehicle uptake in November 2019. The project involves the construction of charging stations at key tourist attractions along a 500-kilometre section of North Queensland highway. The drive is part of the Queensland Electric Superhighway from the Gold Coast to Cairns and forms a part of the government's wider initiative to support electric vehicle uptake.

Queensland gas production rose across 2019 to meet high levels of demand. However, wholesale gas prices continued to decline, with more gas offered at lower prices, combined with comparatively low international gas prices.

Looking ahead, utilities output is forecast to moderate as households and businesses continue to improve their energy efficiency and make greater use of rooftop PV and small-scale technologies.

4.2 Outlook for wages

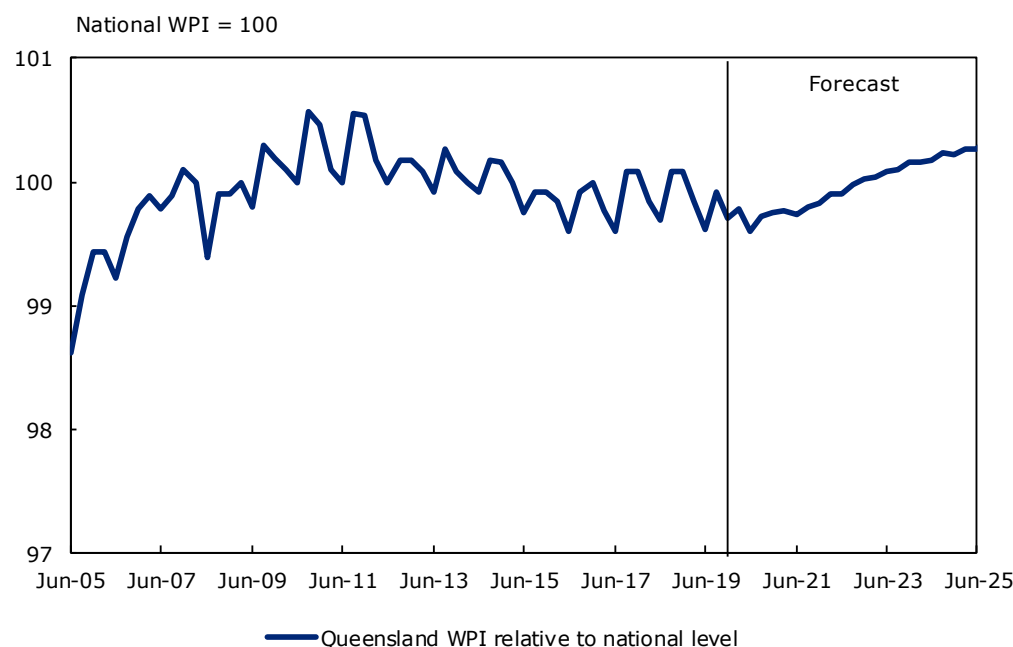
4.2.1 All industries

The Queensland WPI grew by 0.3% in the December quarter of 2019, to be 2.1% higher over the year. This represents a slight moderation from the 2.2% gain in 2018.

Public sector wages are growing at the same pace as private sector wages in Queensland. Public sector wage gains have fallen from a peak of 2.7% in mid-2018 to 2.1% in 2019, while private sector wages have increased slightly from 2.0% to 2.1% over the same period. This is partly due to the Queensland Government's Wages Policy that limits annual wage increases to 2.5%.

Queensland's WPI grew relative to the national WPI from a low in 2004-05 to a high in 2011-12 (see Chart 4.2). The increase in relative wages was primarily driven by the employment-intensive construction phase of the mining boom. Relative wages then moderated as construction wrapped-up at a number of mining projects across the state.

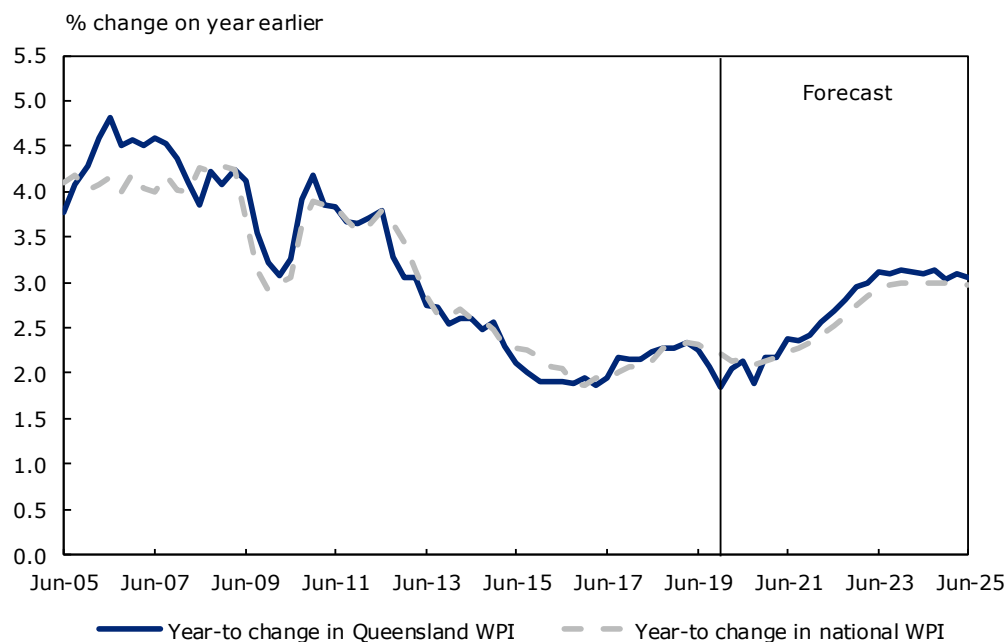
Chart 4.2 Queensland WPI relative to national WPI



Source: ABS, Deloitte Access Economics.

Queensland's WPI grew at a slower rate than the national average in 2019. This comes after two years where the state has experienced wage gains marginally ahead of the national average supported by population and employment growth. The moderation in relative wage gains in 2019 is partly due to slower growth in the Queensland economy as well as the delay in EBA negotiations for Queensland Government employees. Queensland wage gains are set to remain below national wage gains in 2019-20 before returning to grow at above average rates from 2020-21. This largely reflects expectations that the Queensland economy is forecast to grow at faster rates than the wider Australian economy from 2020-21.

Chart 4.3 Queensland general WPI growth



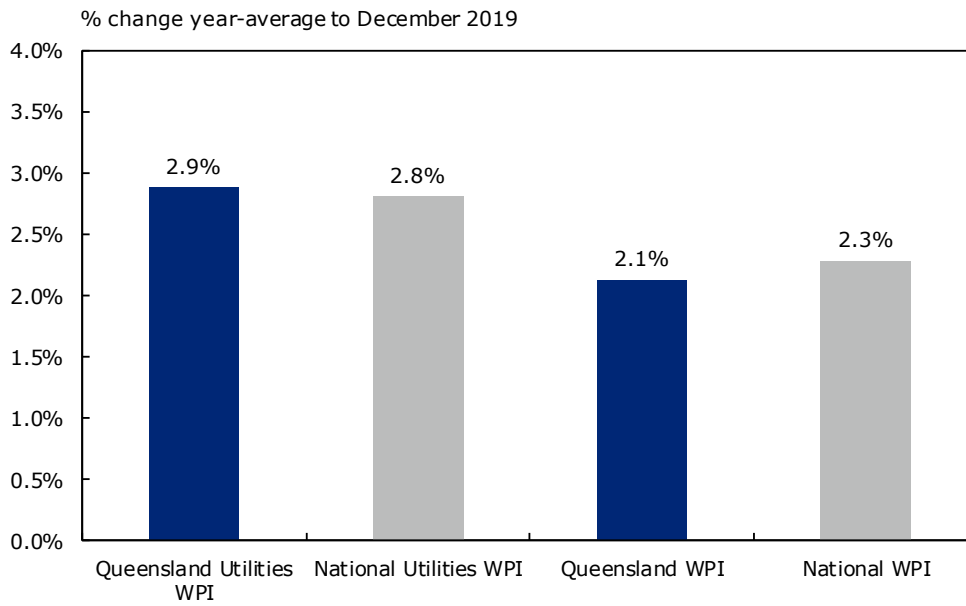
Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
 Source: ABS, Deloitte Access Economics.

Wages gains in Queensland are forecast to moderate from 2.3% in 2018-19 to 2.0% in 2019-20 as growth in SFD continues to moderate. Queensland wages are then forecast to lift to 2.2% growth in 2020-21 before reaching 3.1% in 2024-25. This represents a more moderate lift in wage growth when compared to forecasts in Report 3. Overall, Queensland’s forecast wage growth has been lowered by a cumulative 1.8 percentage points across the forecast period from 2019-20 to 2024-25 that is largely reflective of the revisions to the national wage growth forecasts.

4.2.2 Utilities industry wages

The Queensland utilities WPI grew by 2.9% over the year to the December quarter of 2019 (see Chart 4.4), in-line with national utilities industry wages (at 2.8%) and faster than overall state (2.1%) and national WPI (2.3%).

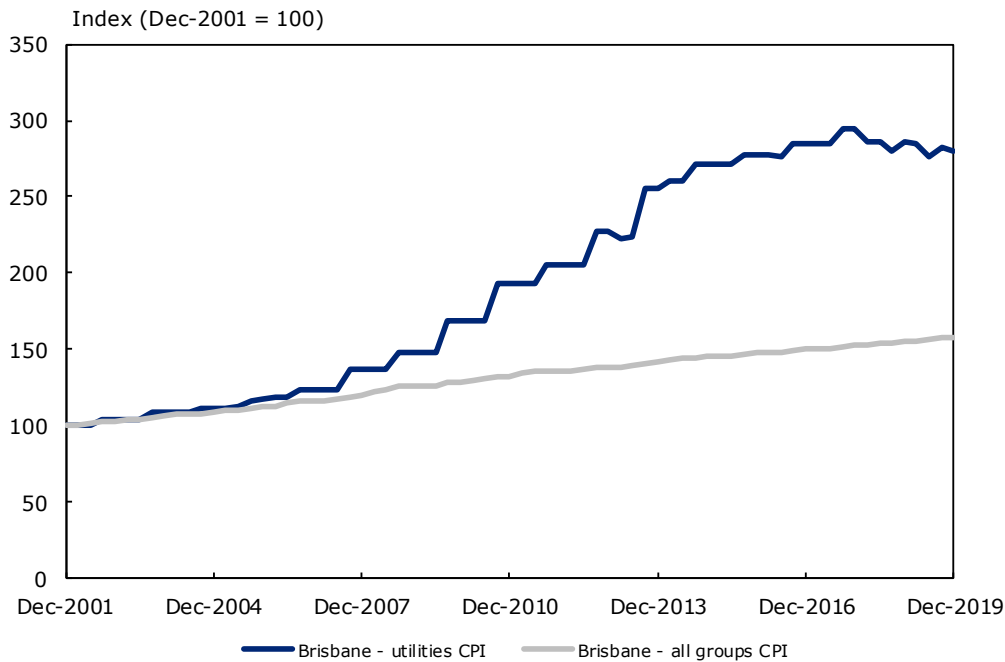
Chart 4.4 Comparative WPI annual growth rates in the year to December 2019



Source: ABS, Deloitte Access Economics.

The Brisbane utilities CPI fell by 1.1% in 2019, following a 2.0% decline in 2018. This comes after a period of strong growth from 2007 and 2014 which saw the utilities CPI grow at an average annual rate of 10.7% compared to the 2.9% gain in CPI for all groups. As a result, Brisbane utilities CPI remains around one fifth higher than CPI for all groups.

Chart 4.5 Brisbane utilities prices

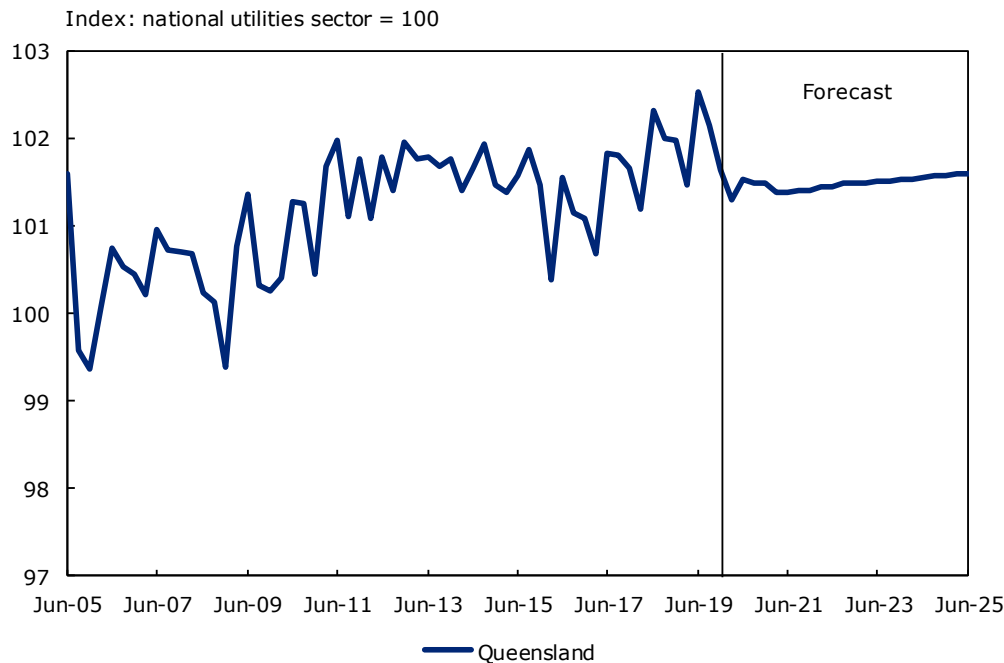


Source: ABS, Deloitte Access Economics.

Wages in the Queensland utilities industry have been above wages in the national utilities industry since 2009. Relative wages grew sharply from late 2008 to mid-2011 as construction ramped-up at

the state’s three large LNG projects. The construction phase of these projects was relatively labour-intensive and led to an increase in employment in the mining and construction industries. Wages increased in order to attract workers, generating upwards pressure on wages in the utilities industry – which attracts workers from a similar labour pool. Relative wages then declined as construction wrapped up on these LNG projects, reaching a trough in early 2016.

Chart 4.6 Relative utilities WPI forecasts for Queensland



Source: ABS, Deloitte Access Economics.

LNG facilities have since commenced production and export. This production phase of the mining boom typically does not benefit wage growth and employment as much as the domestically oriented construction phase. LNG is the exception to this rule. The liquefaction process uses a large amount of electricity and has contributed to the increased demand for electricity in Queensland. This has supported Queensland utilities industry output and wages.

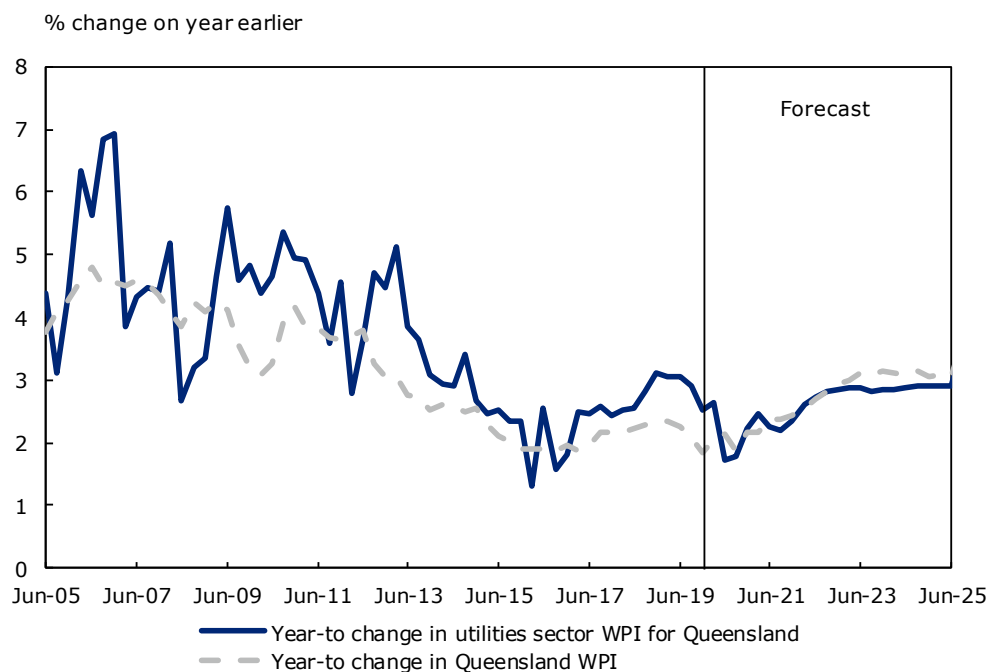
Queensland utilities industry wages are also likely to be affected by the continued transition towards renewable energy generation. The Queensland Government has announced a target to generate one half of Queensland’s energy from renewable sources by 2030 and reach zero net emissions by 2050. As a result, the majority of planned energy projects across the state are in the solar or wind sectors.

The increasing share of renewable energy generation is likely to result in higher demand for particular skills in the utilities workforce. These skills can often take a number of years to acquire, and to the extent that there is a mismatch between skills demanded and skills supplied, there may be upwards pressure on wages.

Queensland utilities industry wage gains are forecast to fall from 3.0% in 2018-19 to 2.4% in 2020-21, before gradually rising to 2.9% in 2022-23. This increase in utilities industry wages mirrors the increase in wages across the wider Queensland economy, and is partly due to the forecast for continued growth in Queensland utilities output. However, utilities wage growth is expected to lag marginally behind growth in the wider Queensland economy from 2022-23.

These forecasts show a more gradual rebound in wages compared to those in Report 3, with wage growth being revised down from 2020-21 to 2022-23.

Chart 4.7 Queensland utilities forecast comparison



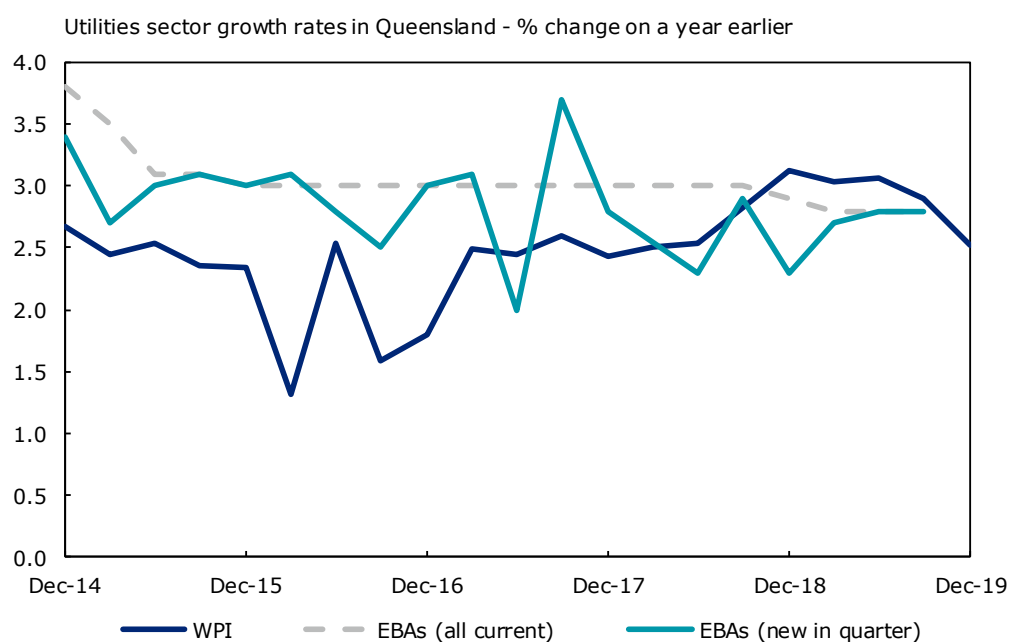
Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
 Source: ABS, Deloitte Access Economics.

4.2.2.2 Comparison with EBA outcomes

As at the September quarter of 2019, there were 58 current EBAs in the Queensland utilities industry, covering approximately 3,600 employees. Wage growth in 'all current EBAs' was 2.8% for the Queensland utilities industry in the September quarter of 2019, the same growth as seen in June 2019. The AAWI in the Queensland utilities industry remains in-line with the AAWI in the national utilities industry.

Wage growth in new Queensland utilities industry EBAs was 2.8% in the year to September 2019, unchanged from June 2019. There were nine new EBA's negotiated in the September 2019 quarter, with an AAWI of 2.8% and covering an additional 300 people in the industry. The AAWI for new EBAs was equal to the AAWI for current EBAs for the second consecutive quarter in September 2019. This comes after a period from mid-2017 where the AAWI for new EBAs has been below those in all current EBAs.

Chart 4.8 Comparative measures of wage growth in the Queensland utilities industry



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Attorney-General's Department

4.2.3 Labour productivity

Queensland labour productivity for both the utilities industry and the wider economy fell in 2018-19 as the slowdown in the economy weighed on output proportionally more than employment. Labour productivity in the Queensland utilities industry is expected to remain flat in 2019-20 before lifting to 0.9% growth in 2020-21 amid an improvement in utilities industry output. Over the forecast period, productivity in the Queensland utilities industry is expected to outpace expected growth at the national level.

Table 4.2 Queensland and national labour productivity forecasts

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Queensland - All industries	-0.3	0.0	0.6	0.8	1.1	1.2	1.3
Queensland - Utilities	-0.5	0.0	0.9	0.8	1.1	1.2	1.3
National - All industries	-0.4	0.0	0.7	0.7	1.0	1.1	1.2
National - Utilities	-0.5	0.0	0.8	0.8	1.0	1.1	1.2

Source: ABS, Deloitte Access Economics.

Note: Productivity forecasts at the state level should be interpreted with care. Quarterly State Final Demand data is used to estimate quarterly GSP, which may not fully capture the impact of interstate trade. This can lead to some volatile movements in the first forecast year for state productivity.

4.2.4 Summary results

Table 4.3 Queensland and national wage forecasts

Financial year changes in Queensland and national nominal Wage Price aggregates							
Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Queensland - All industries	2.3	2.0	2.2	2.5	3.0	3.1	3.1
Queensland - Utilities	3.0	2.4	2.2	2.5	2.9	2.8	2.9
National - All industries	2.3	2.2	2.2	2.4	2.8	3.0	3.0
National - Utilities	2.8	2.8	2.4	2.5	2.8	2.8	2.9

Financial year changes in Queensland and national real Wage Price aggregates							
Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Queensland - All industries	0.7	0.1	0.4	0.5	0.7	0.7	0.8
Queensland - Utilities	1.4	0.5	0.4	0.5	0.6	0.5	0.6
National - All industries	0.6	0.4	0.3	0.4	0.6	0.6	0.7
National - Utilities	1.1	1.0	0.6	0.4	0.6	0.4	0.6

Source: ABS, Deloitte Access Economics.

5 South Australia

5.1 Economic outlook

5.1.1 Overview

South Australian SFD increased by 0.9% over the year to September 2019, down from 4.0% a year earlier. The slowdown in the economy has been driven by lower agricultural output, weaker growth in private consumption, as well as falls in housing and business investment. South Australia continues to be affected by long-running demographic trends that are weighing on population and employment growth in the state. Despite this, economic conditions are being supported by elevated levels of public spending and robust services exports.

Private consumption is estimated to have grown by 0.8% in 2019, the slowest increase since 2013. Consumer spending has been weighed down by the deterioration in consumer confidence from late 2019, which has offset the impact of modest gains in employment and wages. South Australian retail turnover grew by 2.0% in 2019, below the 2.6% gain in 2018. The slowdown in retail sales has been exacerbated by the fact that approximately one quarter of South Australian households receive more than half their income from government transfers. And apart from Tasmania, South Australians have the lowest average disposable incomes in the country.

Housing construction activity remains at its weakest level since 2013. The short term outlook for residential construction remains soft, with the number of dwelling units approved falling by 3.2% in 2019. However, the pace of falls in building approvals has moderated since mid-2019, suggesting that the state is approaching a trough in construction activity. According to CoreLogic, Adelaide property prices grew by 0.4% over the year to January 2020, below the 5.2% gain seen across Australian capital cities.

Subdued business confidence and heightened risks are weighing on investment in South Australia. Private business investment is estimated to have grown by 3.6% in 2019, below the 4.1% gain in 2018. Engineering construction slowed considerably throughout 2019, driven by a moderation of activity in the transport and utilities industries. Commercial construction also slowed alongside the wider slowdown in the South Australian economy. Weaker activity in these industries more than offset a gain in machinery and equipment investment. Private business investment is expected to slow further in 2020 before accelerating thereafter.

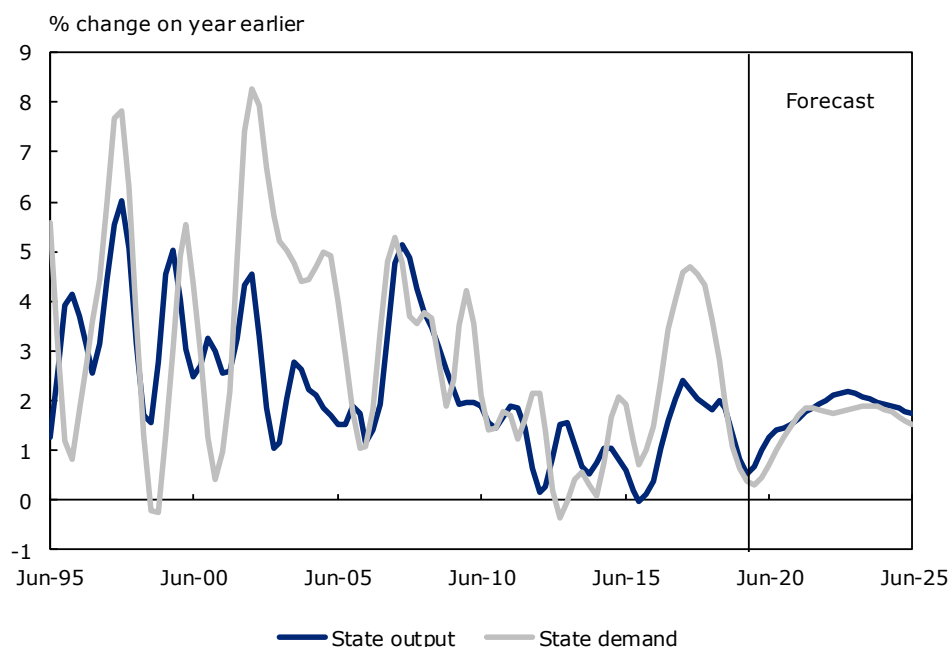
The South Australian labour market also remains relatively subdued. South Australian employment grew by 1.1% over the year to January 2020, below the 2.3% gain across Australia. Recent data has seen the state's unemployment rate fall from 6.3% in September 2019 to 5.9% in January 2020. This has occurred as the earlier increases in the participation rate have reversed. Labour market conditions in South Australia will continue to be affected by rates of population growth that remain below the national average and a rapidly ageing population.

Despite a number of risks and weakness in the South Australian economy, some sectors are experiencing modest growth. Services exports have grown of late, with education overtaking wine as South Australia's largest export. Over 40,000 international students are enrolled in South Australian institutes, the highest number the state has ever experienced. The tourism industry has also shown significant gains over 2019, with South Australia experiencing strong demand from interstate tourists. Both education and tourism are likely to be negatively affected by COVID-19 in coming months.

South Australia's construction industry is also benefitting from elevated levels of infrastructure investment. More than \$10 billion is being spent on infrastructure projects over the four years to 2022-23. And the pipeline continues to grow with the 2019-20 Mid-Year Budget Review announcing an additional \$327 million to accelerate the construction of a number of road projects.

Deloitte Access Economics forecasts South Australian output growth of 0.9% in 2019-20 and 1.5% in 2020-21, below the 2.0% and 2.4% growth in the Australian economy over the same periods. Population and economic growth will remain lower than the Australian average through to 2024-25, resulting in a decline in the state's share of population and output.

Chart 5.1 South Australian output and demand



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Deloitte Access Economics.

Table 5.1 South Australian output and demand forecasts

Annual % change (unless noted)	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Consumption							
Private sector	1.3	0.4	0.7	1.1	1.4	1.5	1.6
Public sector	3.3	2.4	2.4	0.7	0.8	0.9	0.9
Private sector investment							
Dwelling investment	1.0	-8.0	-4.9	6.1	8.6	1.3	-3.9
Non-residential building	8.6	-5.4	6.3	5.3	1.7	3.1	2.5
Engineering construction	6.0	-11.2	8.3	5.7	1.9	2.9	2.2
Machinery and equipment	-3.6	7.8	9.5	7.3	3.8	6.7	6.1
IP and livestock	4.1	6.0	6.9	9.2	5.2	9.1	8.9
Public investment							
General Government	-7.3	2.0	0.2	1.5	2.2	2.6	2.6
Public enterprises	5.4	-3.2	-2.7	-1.7	-1.2	1.4	1.8
Real final demand	1.6	0.4	1.4	1.8	1.8	1.9	1.6
Private sector	1.5	-0.2	1.2	2.3	2.1	2.1	1.8
Public sector	1.9	2.1	1.9	0.7	0.9	1.1	1.1
Gross State output	1.4	0.9	1.5	1.9	2.1	2.0	1.8
Employment	1.1	0.8	1.2	1.3	1.0	0.7	0.4
Unemployment rate (%)	5.6	6.5	6.3	6.2	6.0	5.9	5.9

Note: All variables (except for jobs and unemployment) expressed in inflation adjusted terms.

Source: ABS, Deloitte Access Economics.

5.1.2 Utilities

Utilities industry output grew by 0.2% over 2018-19, below the 3.7% gain in 2017-18. Output has been affected by flat demand for grid-supplied electricity amid the increase in rooftop PV generation. South Australia has also seen large increases in solar and wind generation output following significant investment in new projects from late 2015 to mid-2019.

The increasing integration of renewable energy generation assets has led to a number of changes in South Australia's utilities industry. South Australia broke the record for lowest minimum operational demand on three separate days in the December quarter of 2019. During these troughs, rooftop PV supplied almost two thirds of underlying demand, while mild temperatures contributed to lower demand for cooling. Conversely, South Australia also set a record maximum operational demand for the December quarter in 2019. This was largely driven by the hottest December day on record in South Australia.

Wholesale electricity prices fell by almost three fifths over the year to the December quarter of 2019. As in other states, this decline was driven by increased output from grid-scale wind and solar generation, higher output from gas-fired power stations and lower daytime grid demand amid increased rooftop PV output. South Australia also recorded zero or negative spot prices 7.5% of the time during the December quarter of 2019, the second highest incidence on record. Negative prices have been due to subdued daytime demand and infrastructure constraints at state interconnectors.

The total amount of electricity transferred between Victoria and South Australia continued to increase in the December quarter of 2019. This has occurred despite maintenance which limited the amount of electricity that could be transferred between the two states. South Australia is a net exporter of electricity during daytime hours and a net importer during evening hours.

Future generation projects in South Australia are concentrated in the renewables sector. A total of approximately 10,800MW worth of projects are listed as either committed or proposed by AEMO, two thirds of which are in the wind or solar sectors. There are also a number of storage projects in planning, which will assist in ensuring reliability in the supply of electricity across the state and the NEM.

Natural gas-fired generation is the main source of non-renewable energy generated in South Australia. Electricity output from gas-fired power stations increased over the year to the December quarter of 2019. Output at the Osbourne power station increased due to greater availability, the new Barker Inlet Power Station commenced generation, while system strength directions also led to higher gas-fired electricity generation.

Output in the utilities industry may also be impacted by government initiatives over the coming years. The South Australian Government is providing \$100 million in subsidies to assist up to 40,000 households with the installation of home batteries. The initiative aims to reduce network demand and help lower electricity prices for South Australian consumers.

South Australian utilities output is expected to fall in 2019-20 before accelerating through to 2021-22. Growth in South Australian utilities output is then projected to slow alongside the moderation in national utilities output growth.

5.2 Outlook for wages

5.2.1 All industries

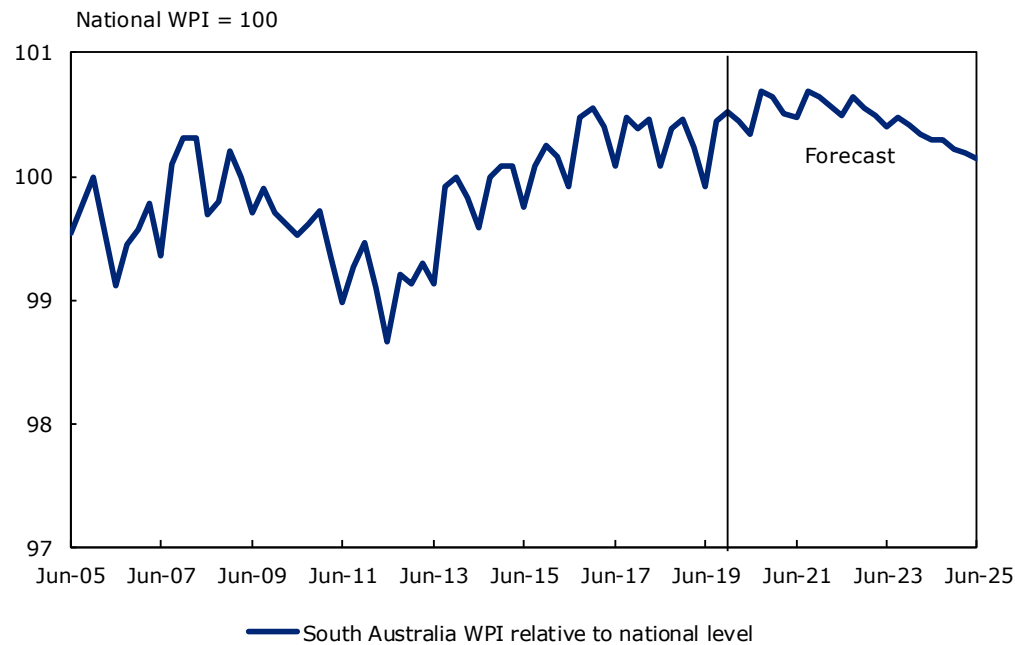
Wage growth in South Australia was 2.2% in 2019, unchanged from 2018. Wage growth in the state remains marginally below the national rate and reflects softer economic conditions in South Australia compared to the broader economy.

Private sector wages are growing at a faster rate than public sector wages in South Australia. Private sector wage gains have lifted from a low of 2.0% in late 2018 to 2.4% in 2019, while public sector wages have fallen from a high of 2.4% to 1.7% over the same period. This has occurred despite strong growth in public sector employment relative to private sector employment in the year to

November 2019. In part, this may be due to the South Australian Government’s renegotiation of EBAs for public servants.

The South Australian WPI is expected to continue to moderate relative to the national WPI over the forecast period (see Chart 5.2).

Chart 5.2 South Australian WPI relative to national WPI

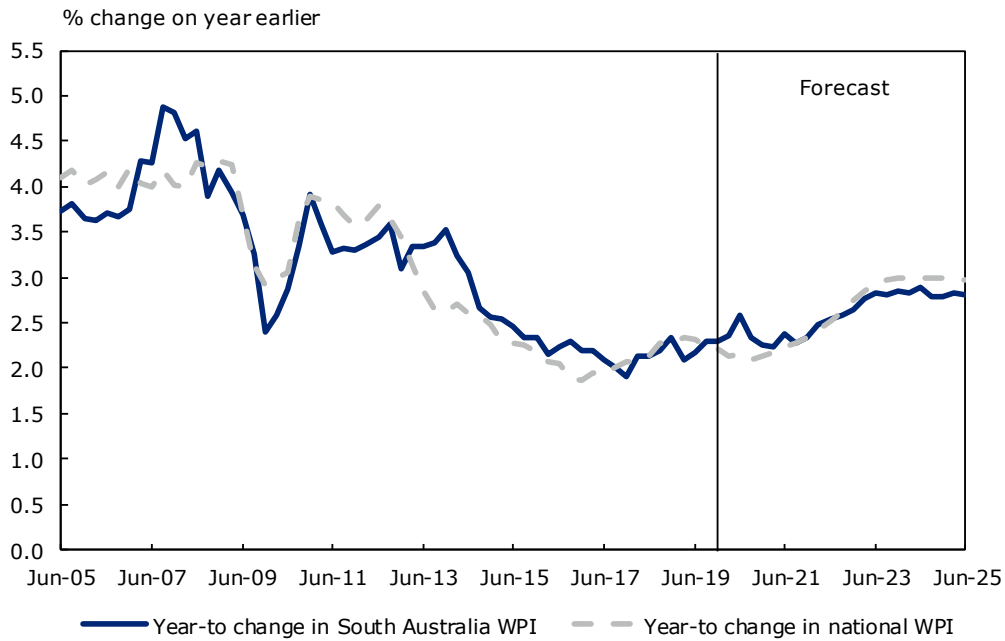


Source: ABS, Deloitte Access Economics.

Wages gains in South Australia are forecast to increase from 2.2% in 2018-19 to 2.4% in 2019-20, before reaching 2.8% by 2023-24. This improvement will occur as the labour market recovers from the end of automotive manufacturing in the state, while naval shipbuilding and government infrastructure spending support employment. South Australia also has an older workforce compared to the national average. As retirements increase over coming years, workers will be handed back greater power in wage negotiations with employers.

Wage growth is expected to experience a more gradual lift compared to the forecasts presented in Report 3 reflecting similar downward revisions at the national level. South Australian WPI is expected to reach the same growth rate in 2024-25 as previously forecast.

Chart 5.3 South Australian general WPI growth

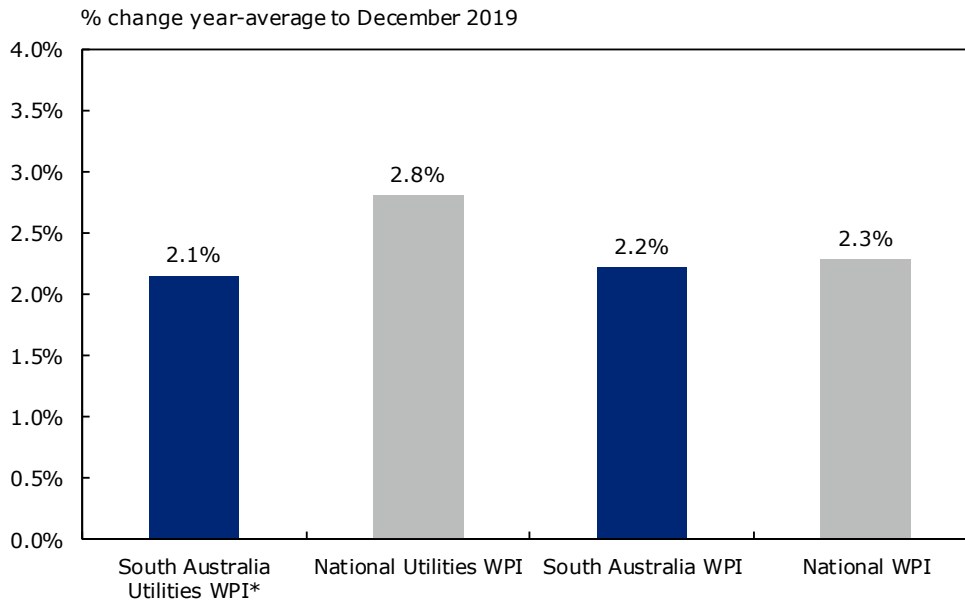


Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
 Source: ABS, Deloitte Access Economics.

5.2.2 Utilities industry wages

South Australian utilities WPI grew by 2.1% over the year to the December quarter of 2019. This is below the growth in the national utilities industry (2.8%) and reflects weaker conditions in the wider South Australian economy.

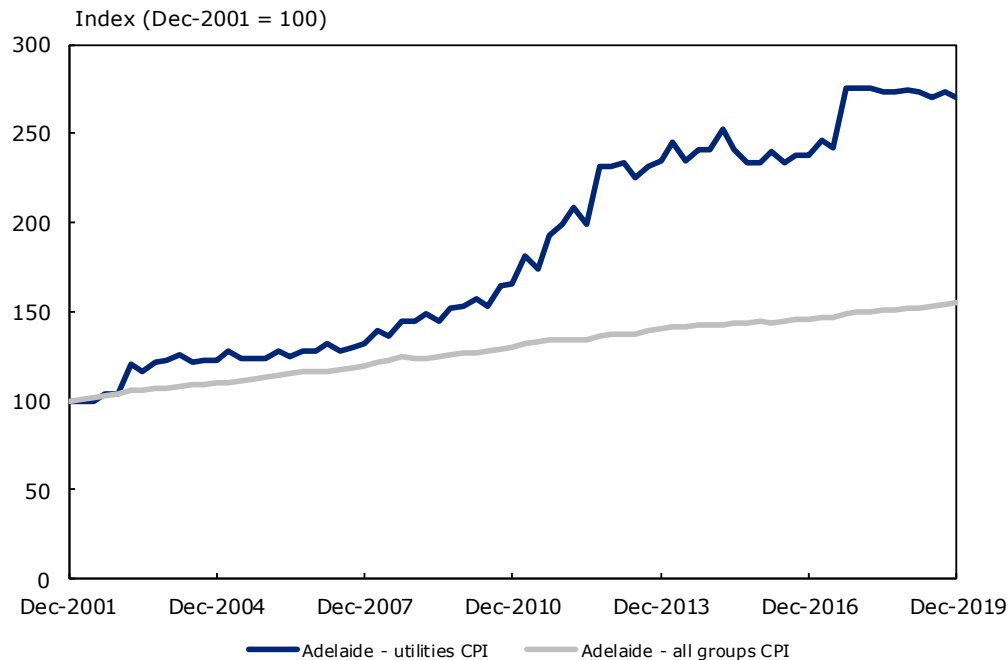
Chart 5.4 Comparative WPI annual growth rates in the year to December 2019



*Historical data estimated using Deloitte Access Economics' wage price model. Unavailable from the ABS.
 Source: ABS, Deloitte Access Economics.

Utilities prices fell in 2019, the first annual fall since 2016. Over the past 15 years the Adelaide utilities CPI has grown at an average annual rate of 5.4%, compared to the 2.3% growth in CPI across all groups. As a result, South Australia had among the highest electricity prices in the world.³ This was partly due to increases in relatively large network and wholesale electricity costs, but was also due to growth in environmental and retail costs.

Chart 5.5 Adelaide utilities prices



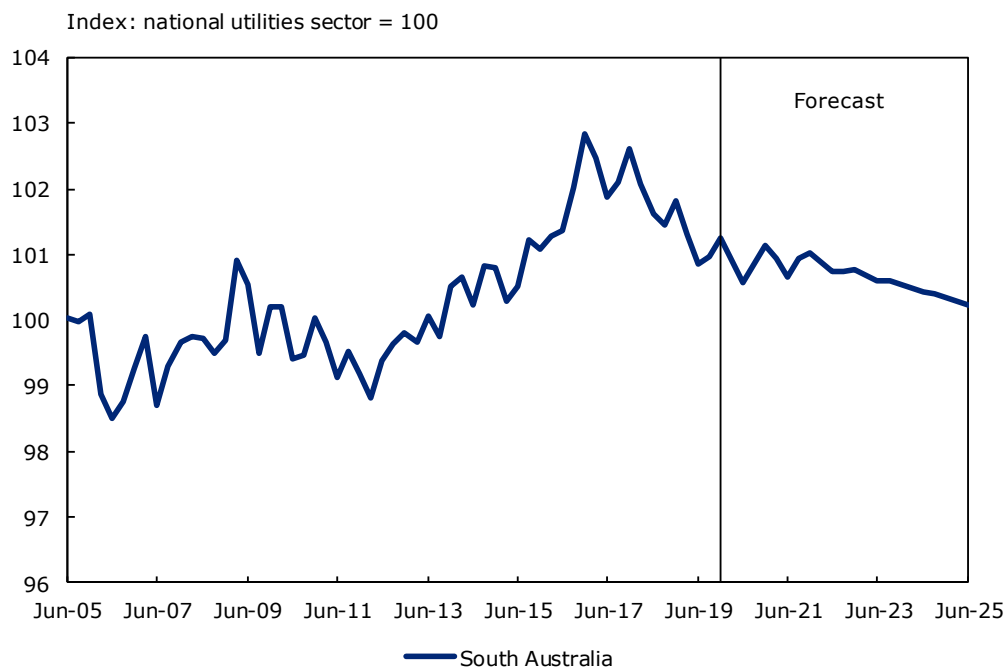
Source: ABS.

Utilities wage growth in South Australia has been lower than the national utilities industry since late 2015. This slowdown in relative utilities wages has partly been driven by the closure of the state’s automotive industry as well as more challenging conditions for other manufacturers. This has led to job losses across the manufacturing industry which has weighed on wage gains.

The slow growth in the South Australian economy relative to the Australian economy has also contributed to weaker wage outcomes in the state’s utilities industry. A key driver of comparatively slow economic growth in South Australia has been low rates of population growth, which weighs on residential electricity demand. This has been a long-running trend placing downward pressure on South Australian utilities output and wages.

³ Australian Competition and Consumer Commission ‘Restoring electricity affordability & Australia’s competitive advantage’ (Final Report, Retail Electricity Pricing Inquiry, 11 July 2018) <<https://www.accc.gov.au/publications/restoring-electricity-affordability-australias-competitive-advantage>>.

Chart 5.6 Relative utilities WPI forecast for South Australia⁴



Source: ABS, Deloitte Access Economics.

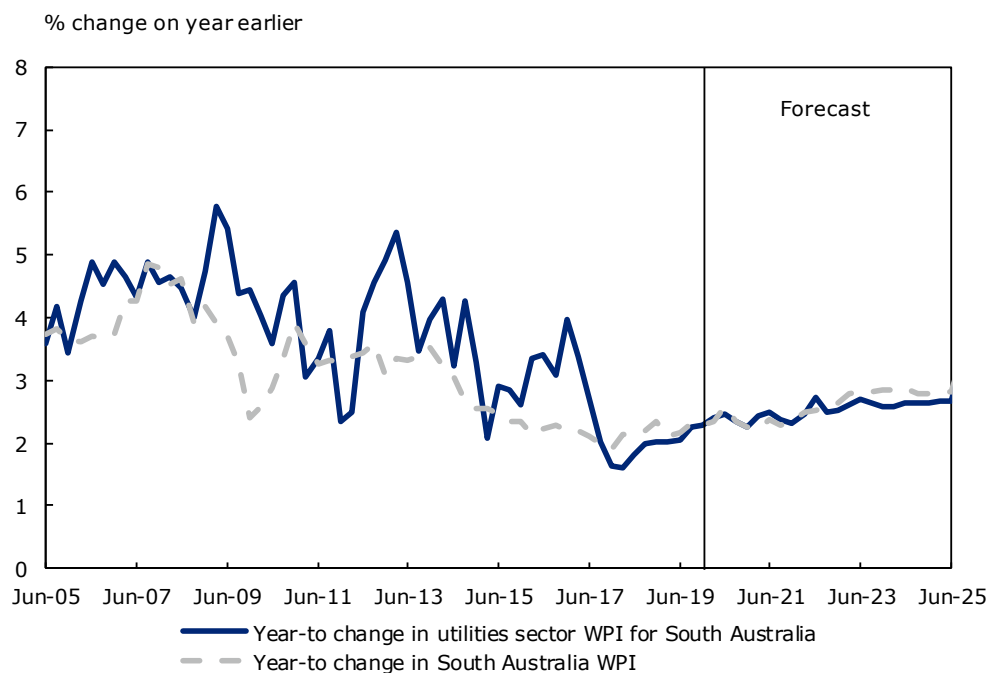
Growth in South Australia’s utilities industry will increasingly be driven by the renewable energy industry in coming years. Over 50% of electricity generation currently comes from wind and solar, with the South Australian Government aiming to reach 100% renewable energy generation within the next ten years. This will see additional investment in wind and solar generation, the expansion of energy storage capacity, as well as upgrades to network infrastructure.

The composition of work in the utilities industry is likely to change as a result of continued investment in renewable energy generation in South Australia. Renewable energy projects will require employees with different skills compared with the skills required in traditional utilities industries. The demand for workers with specific skills is expected to drive upward pressure on wages in the utilities industry. However, this may be partly offset by lower operational employment requirements at some renewable energy generators compared to non-renewable generators.

South Australian utilities wage growth is forecast to reach 2.3% in 2019-20, up from 2.0% in 2018-19. Utilities wage growth in South Australia is forecast to be 2.7% in 2024-25. This represents a downward revision compared to forecasts in Report 3. Utilities wages are lower by a cumulative 1.1 percentage points from 2019-20 to 2023-24, before returning to the same growth rate as previously forecast in 2024-25.

⁴ South Australian utilities sector wage growth is estimated from ABS data. The approach used has been streamlined in this report compared to Report 3. The revised approach results in a less volatile historical series.

Chart 5.7 South Australian utilities WPI forecast comparison



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
 Source: ABS, Deloitte Access Economics.

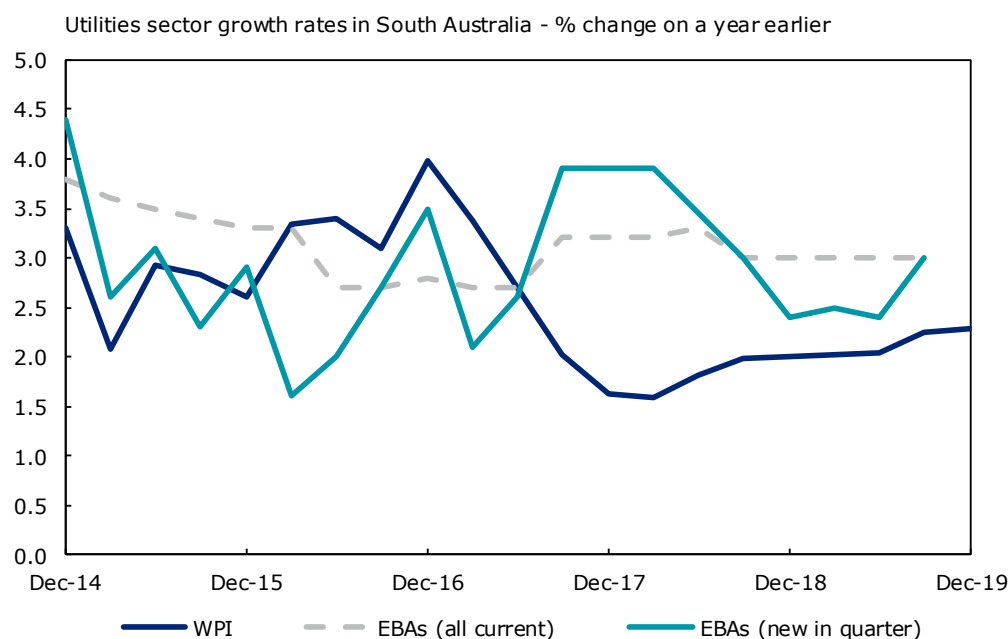
5.2.2.2 Comparison with EBA outcomes

In September 2019, there were 24 current EBA for the South Australian utilities industry covering around 4,600 employees, with an average annual wage increase of 3.0%. Chart 5.8 shows that:

- Wage growth for current EBAs in the utilities industry remained steady at 3.0% in the September quarter of 2019, but remains below rates the 3.3% gains seen in mid-2018.
- Wage growth for new EBAs approved in the utilities industry in September quarter of 2019 was 3.0%, an increase from 2.4% in the previous quarter. The seven new EBAs negotiated in the September quarter cover an additional 300 people

South Australian utilities WPI growth has now been below the AAWI for both new and current EBAs since mid-2017.

Chart 5.8 Comparative measures of wage growth in the South Australian utilities industry



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.

Source: ABS, Attorney-General's Department

5.2.3 Labour productivity

Labour productivity for South Australia's utilities industry declined by 0.5% in 2018-19, and is expected to experience remain flat in 2019-20. Looking ahead, labour productivity growth in the South Australian utilities industry will be supported by:

- Increased activity related to defence projects, including frigate and submarine shipbuilding, that will support electricity demand and create employment opportunities in the manufacturing and construction industries.
- State government investment in energy infrastructure to increase the reliability of energy supply.

This will see productivity in South Australia's utilities industry growth largely in-line with the Australian utilities industry, reaching 1.3% growth in 2024-25.

Table 5.2 South Australia and national labour productivity forecasts

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
South Australia - All industries	0.3	0.1	0.3	0.6	1.1	1.3	1.5
South Australia - Utilities	-0.5	0.0	0.8	0.8	1.1	1.2	1.3
National - All industries	-0.4	0.0	0.7	0.7	1.0	1.1	1.2
National - Utilities	-0.5	0.0	0.8	0.8	1.0	1.1	1.2

Note: Productivity forecasts at the state level should be interpreted with care. Quarterly State Final Demand data is used to estimate quarterly GSP, which may not fully capture the impact of interstate trade. This can lead to some volatile movements in the first forecast year for state productivity.

Source: ABS, Deloitte Access Economics.

5.2.4 Summary results

Table 5.3 South Australia and national wage forecasts

Financial year changes in South Australia and national nominal Wage Price aggregates

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
South Australia - All industries	2.2	2.4	2.3	2.4	2.7	2.8	2.8
South Australia - Utilities*	2.0	2.3	2.4	2.5	2.6	2.6	2.7
National - All industries	2.3	2.2	2.2	2.4	2.8	3.0	3.0
National - Utilities	2.8	2.8	2.4	2.5	2.8	2.8	2.9

Financial year changes in South Australia and national real Wage Price aggregates

Annual % change	History		Forecast				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
South Australia - All industries	0.6	0.4	0.5	0.4	0.4	0.4	0.5
South Australia - Utilities*	0.5	0.3	0.6	0.4	0.3	0.2	0.4
National - All industries	0.6	0.4	0.3	0.4	0.6	0.6	0.7
National - Utilities	1.1	1.0	0.6	0.4	0.6	0.4	0.6

*Historical data estimated using Deloitte Access Economics' wage price model. Unavailable from the ABS.

Source: ABS, Deloitte Access Economics.

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